

# **Toll Bridge Seismic Retrofit and Regional Measure 1 Programs**

Monthly Progress Report November 2006



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Released: December 2006



# **Toll Bridge Seismic Retrofit and Regional Measure 1 Programs**

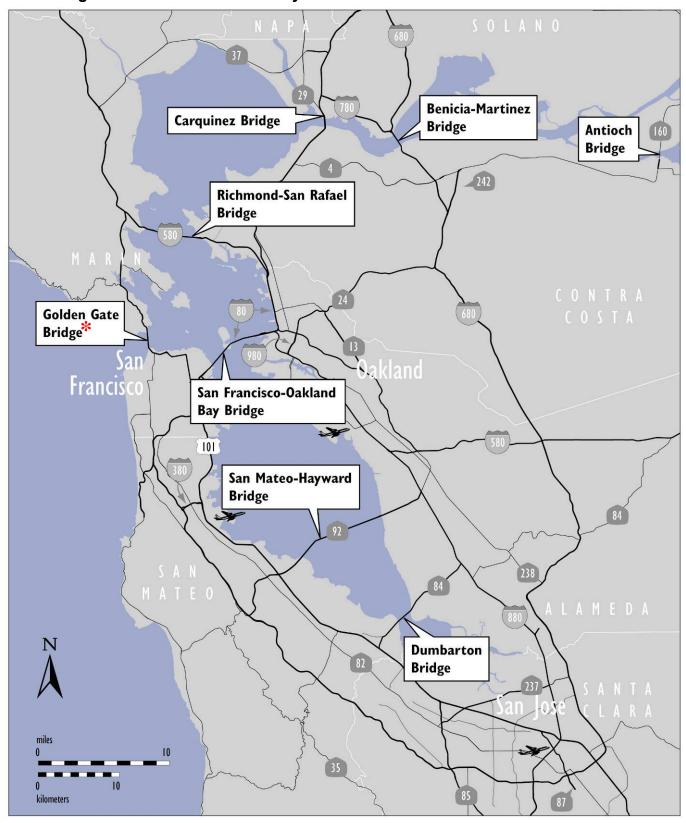
Monthly Progress Report November 2006



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# Toll Bridges of the San Francisco Bay Area



<sup>\*</sup> Under the Jurisdiction of the Golden Gate Bridge, Highway and Transportation District

## INTRODUCTION

In July 2005, Assembly Bill 144, Hancock (AB 144) created the Toll Bridge Project Oversight Committee (TBPOC) to implement a project oversight and project control process for the Benicia-Martinez Bridge project and the state toll bridge seismic retrofit program projects. Comprised of the Caltrans Director, the Bay Area Toll Authority (BATA) Executive Director and the Executive Director of the California Transportation Commission (CTC), the TBPOC's project oversight and control processes include but are not limited to reviewing bid specifications and documents, providing field staff to review ongoing costs, reviewing and approving significant change orders and claims in excess of \$1 million (as defined by the committee) and preparing project reports.

AB 144 identified the Toll Bridge Seismic Retrofit Program and the new Benicia-Martinez Bridge Project as under the direct oversight of the TBPOC. The Toll Bridge Seismic Retrofit Program includes:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Construction
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
Eastbound Carquinez Bridge Seismic Retrofit	Complete
Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

The new Benicia-Martinez Bridge is part of a larger program of toll-funded projects, called the Regional Measure 1 (RM1) Toll Bridge Program, under the responsibility of the BATA. While the rest of the projects in the RM1 program are not directly under the responsibility of the TBPOC, BATA and Caltrans (CT) will continue to report on their progress as an informational item. The RM1 program includes:

RM1 Projects	Open to Traffic Status
New Benicia-Martinez Bridge	Construction
1927 Carquinez Bridge Demolition	Construction
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Construction
Interstate 880/State Route 92 Interchange Reconstruction	Design
Richmond-San Rafael Bridge Trestle, Fender & Deck Joint Rehabilitation	Open
Westbound Carquinez Bridge Replacement	Open
San Mateo-Hayward Bridge Widening	Open
State Route 84 Bayfront Expressway Widening	Open
Richmond Parkway	Open

This report focuses on identifying critical project issues and monitoring project cost and schedule performance for the projects as measured against approved budgets and schedule milestones. This report is intended to fulfill Caltrans' requirement to provide monthly project progress reporting to the TBPOC under Section 30952.05 of the Streets and Highway Code.

# **EXECUTIVE SUMMARY**

# Toll Bridge Seismic Retrofit Program—Cost (\$Millions)

Project	Work Status	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast*	At- Completion Variance	Cost Status
a	b	С	d	e = c + d	f	g	h = g - e	i
SFOBB East Span Replacement Project								
Capital Outlay Support		959.4	-	959.4	456.9	977.1	17.7	
Capital Outlay Construction								
Skyway	Construction	1,293.0	-	1,293.0	1,100.9	1,293.0	-	•
SAS E2/T1 Foundations	Construction	313.5	-	313.5	181.1	313.5	-	•
SAS Superstructure	Construction	1,753.7	-	1,753.7	143.9	1,767.4	13.7	
YBI South/South Detour	Design/Const	131.9		131.9	36.3	152.2	20.3	
YBI Transition Structures	Design	299.3	-	299.3	-	318.5	19.2	
Oakland Touchdown (OTD)		283.8	-	283.8	-	302.5	18.7	
* OTD Submarine Cable	Advertise				-	9.6	-	•
* OTD No. 1 (Westbound)	Design				-	226.5	-	
* OTD No. 2 (Eastbound)	Design				-	62.0	-	•
* OTD Electrical Systems	Design				-	4.4	-	•
Existing Bridge Demolition	Design	239.2	-	239.2	-	222.0	(17.2)	•
Stormwater Treatment Measures	Construction	15.0	-	15.0	4.4	15.0	-	•
East Span Completed Projects		90.3	-	90.3	88.5	90.3	-	
Right-of-Way and Environmental Mitigation		72.4	-	72.4	38.8	72.4	-	•
Other Budgeted Capital		35.1	-	35.1	0.6	11.0	(24.1)	
Total SFOBB East Span Replacement Project		5,486.6	-	5,486.6	2,051.4	5,534.9	48.3	
SFOBB West Approach Replacement	Construction							•
Capital Outlay Support		120.0	-	120.0	84.9	120.0	-	
Capital Outlay Construction		309.0	-	309.0	215.5	309.0	-	
Total SFOBB West Approach Replacement		429.0	-	429.0	300.4	429.0	-	
Richmond-San Rafael Bridge Retrofit	Construction							•
Capital Outlay Support		134.0	(7.0)	127.0	125.6	127.0	-	
Capital Outlay Construction		780.0	(82.0)	698.0	665.6	698.0	-	
Total Richmond-San Rafael Bridge Retrofit		914.0	(89.0)	825.0	791.2	825.0	-	
Program Completed Projects	Complete							
Capital Outlay Support		219.8	-	219.8	219.4	219.8	-	
Capital Outlay Construction		705.6	-	705.6	698.0	705.6	-	
<b>Total Program Completed Projects</b>		925.4	-	925.4	917.4	925.4	-	
Miscellaneous Program Costs		30.0	-	30.0	24.9	30.0	-	
Program Contingency		900.0	89.0	989.0	-	940.7	(48.3)	
Total Toll Bridge Seismic Retrofit Program		8,685.0	-	8,685.0	4,085.3	8,685.0	-	

Within Approved Current Schedule and Budget

Note: Details may not sum to totals due to rounding effects.

Potential Cost and Schedule Impacts: Possible future need for Program Contingency Allocation

Known Cost and Schedule Impacts: Request for Program Contingency Allocation forthcoming

<sup>\*</sup> Cost forecasts are as of August 31, 2006. Forecasts for the Monthly Reports are generally updated on a quarterly basis in conjunction with Risk Analysis assessments for the TBSRP Projects and the TBSRP Quarterly Reports.

# Toll Bridge Seismic Retrofit Program—Schedule

Project	AB 144 / SB 66 Project Complete Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (10/2006)	Project Complete Schedule Forecast (10/2006)	Schedule Variance (Months)	Schedule Status	Remarks
a	b	С	d= b + c	е	f = e – d	g	h
SFOBB East Span Replacement Proje Skyway	Apr 07	8	Dec 07	Dec 07	-	•	A schedule extension due to hinge pipe beam fabrication, service platforms electrical appurtenances, polyester concrete, etc., has been approved by the TBPOC. See page 11.
SAS E2/T1 Foundations	Jun 08	(3)	Mar 08	Mar 08	-	•	
SAS Superstructure	Mar 12	12	Mar 13	Mar 13	-	•	Contract executed on May 3, 2006. See Note.
YBI South/South Detour	Jul 07	-	Jul 07	TBD	TBD	•	Schedule is being assessed. Forecast completion date is TBD. See page 19.
YBI Transition Structures	Nov 13	12	Nov 14	Nov 14	•	•	In March 2006, the TBPOC approved the split of the YBI contract into three contracts. Schedules and estimates for the split contracts are being developed
Oakland Touchdown (OTD)	Nov 13	12	Nov 14	Nov 14	-	•	
OTD Submarine Cable	n/a		Jul 07	Oct 07	3		This contract to be re-bid. See pages 9 and 22.
OTD Westbound	n/a		Jul 09	Oct 09	3		Advertise date postponed to provide additional time for utility coordination and contract formation.
OTD Eastbound	n/a		Nov 14	Nov 14	-	•	See Note.
Existing Bridge Demolition	Sep 14	12	Sep 15	Sep 15	-	•	See Note.
Stormwater Treatment Measures	Mar 08	-	Mar 08	Jun 07	(9)	•	Forecast based on actual award date and duration in contractor's A+B bid.
Open to Traffic Date: Westbound	Sep 11	12	Sep 12	Sep 12	-	•	See Note.
Open to Traffic Date: Eastbound	Sep 12	12	Sep 13	Sep 13	-	•	See Note.
SFOBB West Approach Replacement	Aug 09	-	Aug 09	Aug 09		•	
Richmond-San Rafael Bridge							
Seismic Retrofit	Aug 05	-	Aug 05	Oct 05	2	•	Seismic retrofit completed July 29, 2005. Formal acceptance of contract October 28, 2005. \$89 million has been transferred to Program Contingency. See page 31.
Public Access Project	n/a	-	May 07	May 07	-	•	Bids opened November 1, 2006.

Note: Schedules for selected projects and the Open to Traffic dates were extended by 12 months from the AB144/SB66 baseline schedule due to Addenda #5 and #7 on the SAS Superstructure contract.

# Regional Measure 1 Program—Cost (\$Millions)

Project	Work Status	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast*	At- Completion Variance	Cost Status
a	b	С	d	e = c + d	f	g	h = g - e	I
New Benicia-Martinez Bridge Project	Construction							•
Capital Outlay Support		157.1	24.8	181.8	159.2	181.8	-	
Capital Outlay Construction		861.6	143.1	1,004.7	879.8	1,004.7	-	
Capital Outlay Right-of-Way		20.4	(0.1)	20.3	12.3	20.3	-	
Project Reserve		20.8	35.3	56.2	-	56.2	-	
Total New Benicia-Martinez Bridge Project		1,059.9	203.1	1,263.0	1,051.3	1,263.0	-	
Carquinez Bridge Replacement Project	Construction							•
Capital Outlay Support		124.4	(1.1)	123.3	117.5	123.2	(0.1)	
Capital Outlay Construction		381.2	3.3	384.5	365.1	384.3	(0.2)	
Capital Outlay Right-of-Way		10.5	-	10.5	9.9	10.5	-	
Project Reserve		12.1	(2.2)	9.9	-	10.2	0.3	
Total Carquinez Bridge Replacement Project		528.2	-	528.2	492.5	528.2	-	
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Construction							•
Capital Outlay Support		8.0	(3.5)	4.5	2.7	4.5	-	
Capital Outlay Construction		16.9	3.6	20.5	12.4	20.5	-	
Project Reserve		0.1	(0.1)	-	-	-	-	
Total Richmond-San Rafael Bridge Deck Overlay Rehabilitation		25.0	-	25.0	15.1	25.0		
I-880/SR-92 Interchange Reconstruction	Design							•
Capital Outlay Support		28.8	-	28.8	30.1	51.7	22.9	
Capital Outlay Construction		94.8	-	94.8	-	122.5	27.7	
Capital Outlay Right-of-Way		9.9	-	9.9	8.0	12.4	2.5	
Project Reserve		0.3	-	0.3	-	9.7	9.4	
Total I-880/SR-92 Interchange Reconstruction		133.8	-	133.8	38.1	196.3	62.5	
Program Completed Projects	Complete							
Capital Outlay Support		54.0	(0.5)	53.5	54.0	55.4	1.9	
Capital Outlay Construction		307.5	(1.1)	306.4	274.8	296.8	(9.6)	
Capital Outlay Right-of-Way		1.7	-	1.7	0.5	0.8	(0.9)	
Project Reserve		2.5	1.6	4.1	-	1.8	(2.3)	
Total Program Completed Projects		365.7	-	365.7	329.3	354.8	(10.9)	
Total Regional Measure 1 Program		2,112.6	203.1	2,315.7	1,926.3	2,367.3	51.6	

Within Approved Current Schedule and Budget

Potential Cost and Schedule Impacts: Possible future need for Program Contingency Allocation

Known Cost and Schedule Impacts: Request for Program Contingency Allocation forthcoming

Note: Details may not sum to totals due to rounding effects.

\* Cost forecasts are as of August 31, 2006. Forecasts for the Monthly Reports are generally updated on a quarterly basis in conjunction with Risk Analysis assessments for the TBSRP Projects and the TBSRP Quarterly Reports.

# Regional Measure 1 Program—Schedule

Project	BATA Project Complete Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (10/2006)	Project Complete Schedule Forecast (10/2006)	Schedule Variance (Months)	Schedule Status	Remarks
a	b	С	d= b + c	е	f = e - d	g	h
New Benicia-Martinez Bridge Project							
New Benicia-Martinez Bridge	Dec 07	-	Dec 07	Dec 07	-	•	
• I-680/I-780 Interchange Replacement	Dec 07		Dec 07	Feb 08	2		Final electrical work to be completed after Bridge Open to Traffic. Structure was substantially completed as of November 1, 2006. See page 44.
Open to Traffic Date	Dec 07	-	Dec 07	Dec 07	-	•	
1927 Carquinez Bridge Demolition Project	Dec 07	-	Dec 07	Dec 07	-	•	
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Jan 07	-	Jan 07	Jan 07	-	•	
I-880/SR-92 Interchange Reconstruction	Nov 10	-	Nov 10	Jun 11	7	•	Delay in the procurement of right-of-way is impacting the cost/schedule for this project. See page 51.

# Highlights of Project/Program Activities and TBPOC Actions for November 2006

## **Toll Bridge Seismic Retrofit Program**

## SFOBB East Span Seismic Replacement Project

- Drilling for rock sockets has started on the T1 foundation for the SAS E2/T1 Foundations contract. The steel footing frame for the Pier E2 has been placed and installation of the cofferdam sheet piling has started.
- On the Yerba Buena Island South/South Detour contract, the Contractor, C.C. Myers, has remobilized on site and has placed all the required Storm Water Pollution Plan Preparation (SWPPP) measures. In November 2006, the TBPOC approved a capital outlay construction forecast of \$152.2 million. (See page 19).
- Oakland Touchdown Submarine Cable Relocation contract conducted a bid opening on September 19, 2006, at which time only one bid was received, which was over the Engineer's Estimate. In November 2006, the TBPOC directed that this contract be re-advertised. (See pages 9 and 22).

#### Richmond-San Rafael Bridge Seismic Retrofit Project

The Richmond-San Rafael Public Access Project to construct a public access lot to comply with a Bay Conservation and Development Commission (BCDC) permit condition conducted a bid opening on November 1, 2006. Seven bids were submitted with Ghilloti Bros. Inc., submitting the apparent lowest A+B bid of \$1,005,863.40 as compared to the Engineer's Estimate of \$1,072,157.25. (See page 31).

## **Regional Measure 1 Program**

#### **New Benicia-Martinez Bridge Projects**

As of the end of October 2006, all 344 segments of Frames 2 and 3 of the new Benicia-Martinez bridge has been completed. Five (5) of the nine (9) concrete closure pours, which links the individual piers together into a frame have been completed. (See page 43)

#### Richmond-San Rafael Bridge Deck Overlay Project

As of the end of this month, all lanes on the bridge have been completed with polyester overlay. Joint repair work on both decks of the bridge is on-going. All remaining work is expected to be completed by Thanksgiving 2006. (See page 48).



# **PROJECT / CONTRACT REPORTS**

# Toll Bridge Seismic Retrofit Program

San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Summary

- Skyway Contract
- Self-Anchored Suspension (SAS) Superstructure Contract
- Self-Anchored Suspension (SAS) E2/T1 Foundations Contract
- Yerba Buena Island (YBI)
  - \* Yerba Buena Island (YBI) South/South Detour Contract
  - \* Yerba Buena Island (YBI) Transition Structure Contracts
- Oakland Touchdown (OTD)
  - \* Oakland Touchdown (OTD) Submarine Cable Relocation Contract
  - \* Oakland Touchdown (OTD) #1 Contract
  - \* Oakland Touchdown (OTD) #2 Contract
- Other Major Contracts
- Other Contracts and Related Project Work

San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project Richmond-San Rafael Bridge Seismic Retrofit Project

Other Completed Seismic Retrofit Projects

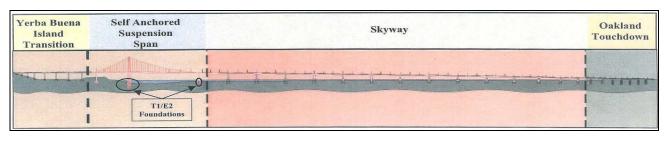
# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Summary

**Project Description:** The East Span will be seismically retrofitted through the complete replacement of the existing span. The remaining effort for this project consists of the following contracts: Skyway—construction of two parallel concrete structures, each approximately 1.3 miles in length; Self-Anchored Suspension (SAS) Foundation—construction of SAS marine foundations; SAS Superstructure—construction of a self-anchored 385-meter main span superstructure incorporating a 160-meter fabricated structural steel tower with a main cable and inclined suspenders that will support steel orthotropic decks; Yerba Buena Island (YBI) South/South Detour—design and construction of a temporary double-deck bypass structure that will detour traffic to the existing SFOBB while completing the westerly permanent tie-in structure of the new East Span at Yerba Buena Island; YBI Structures—construction of a new structure connecting the western end of the self-anchored suspension to the Yerba Buena Island viaduct, which will be retrofitted; Oakland Touchdown—at the Oakland end of the East Span, construction of two parallel, cast-in-place post-tensioned concrete viaducts, which join the skyway to the at-grade Oakland approach fill; and Existing Bridge Demolition—demolition of the existing 1936 SFOBB East Span structure after the construction and placement of traffic onto the new East Span.

SFOBB East Span Replacement Cost Summary (\$Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	959.4	-	959.4	456.9	977.1	17.7
Capital Outlay				-	-	-
Skyway	1,293.0	-	1,293.0	1,100.9	1,293.0	-
SAS E2/T1 Foundations	313.5	-	313.5	181.1	313.5	-
SAS Superstructure	1,753.7	-	1,753.7	143.9	1,767.4	13.7
YBI South/South Detour	131.9	-	131.9	36.3	152.2	20.3
YBI Structures	299.3	-	299.3	-	318.5	19.2
Oakland Touchdown (OTD)	283.8	-	283.8	-	302.5	18.7
* OTD Submarine Cable				-	9.6	
* OTD No. 1 (Westbound)				-	226.5	
* OTD No. 2 (Eastbound)				-	62.0	
* OTD Electrical Systems				-	4.4	
Existing Bridge Demolition	239.2	-	239.2	-	222.0	(17.2)
Stormwater Treatment Measures	15.0	-	15.0	4.4	15.0	-
East Span Completed Projects	90.3	-	90.3	88.5	90.3	-
Right-of-Way and Environmental Mitigation	72.4	-	72.4	38.8	72.4	-
Other Budgeted Capital	35.1	-	35.1	0.6	11.0	(24.1)
TOTAL	5,486.6	-	5,486.6	2,051.4	5,534.9	48.3

Note: Details may not sum to totals due to rounding effects.



SFOBB East Span Replacement Project

SFOBB East Span Replacement Schedule Summary

Contract	AB 144/SB 66 Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
Skyway	April 2007	8	December 2007	December 2007	-
YBI South / South Detour*	July 2007	-	July 2007	TBD	TBD
Stormwater Treatment Measures	March 2008	-	March 2008	June 2007	(9)
SAS E2/T1 Foundations	June 2008	(3)	March 2008	March 2008	-
Open to Traffic: Westbound	September 2011	12	September 2012	September 2012	-
SAS Superstructure	March 2012	12	March 2013	March 2013	-
Open to Traffic: Eastbound	September 2012	12	September 2013	September 2013	-
Oakland Touchdown (OTD)	November 2013	12	November 2014	November 2014	-
* OTD Submarine Cable	n/a		July 2007	October 2007	3
* OTD No. 1 (Westbound)	n/a		July 2009	October 2009	3
* OTD No. 2 (Eastbound)	n/a		November 2014	November 2014	-
YBI Transition Structure*	November 2013	12	November 2014	November 2014	-
Existing Bridge Demolition*	September 2014	12	September 2015	September 2015	-

<sup>\*</sup> Contract schedules being further assessed due to changes in SAS schedule.

**Project Status**: Construction is currently ongoing on the Skyway, YBI South/South Detour, SAS E2/T1 Foundations and Stormwater Treatment Measures contracts. One contract is in the advertising/bid cycle: the Oakland Touchdown (OTD) Submarine Cable Relocation contract. Contracts in design include the OTD #1 (westbound), OTD #2 (eastbound), the YBI Transition Structure (YBITS) Contract #1, YBITS Contract #2, and Existing Bridge Demolition contract. Design of each contract is proceeding per its schedule requirements. Bids for the OTD Submarine Cable Relocation Contract were opened on September 19, 2006; however, only one bid was received and it was higher than the Engineer's Estimate. The TBPOC has directed that this contract be readvertised in a way that will maximize competition and maintain or advance the east span corridor schedule.

SAS contract addenda extended the SAS contract by a total of 12 months but also provided for an early completion incentive. There has been a like impact to the Westbound and Eastbound Open to Traffic dates, and the completion of the OTD, YBI Transition Structure, and the Existing Bridge Demolition contracts. The East Span corridor cost and schedule forecast does not assume achievement of the early completion incentive that was also part of Addendum #7; however, schedule planning of the future construction contracts continues assuming that the SAS early completion is achieved to ensure that they will not impact bridge opening in that event.

**Project Issues:** All projects now have a Risk Response Team and a Risk Register incorporating quantitative risk analyses. A preliminary risk register has also been developed for Capital Outlay Support (COS) costs, as has a program-level risk register that captures risks common to all projects; the development of a quantitative COS risk analysis is in progress. The Risk Response Teams have focused attention on developing and executing risk response actions for their most significant risks. Many of the actions have been effective, as evidenced by a reduction of risk impacts on the Skyway and E2/T1 contracts from the previous quarter. The effort to develop and execute risk response actions to mitigate the cost and schedule impacts posed by risk issues will continue to be a high priority.

**Recent TBPOC Actions:** See the following contract detail pages for specific TBPOC actions on East Span contracts.

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### SKYWAY CONTRACT

**Contract Description:** The Skyway contract constructs two parallel pre-cast concrete approach spans from Oakland to the self-anchored suspension span near Yerba Buena Island.

**Skyway Cost Summary (\$Millions)** 

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes c	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006)	Cost Forecast (10/2006) f	Variance g = f - d
East Span - Skyway						
Capital Outlay Support	197.0	-	197.0	150.3	197.0	-
Capital Outlay Construction	1,293.0	-	1,293.0	1,100.9	1,293.0	-
TOTAL	1,490.0	-	1,490.0	1,251.2	1,490.0	-

Note: Details may not sum to totals due to rounding effects.

**Skyway Schedule Summary** 

	AB 144/SB 66		Contract Complete		
	Contract Completion	Approved	Current Approved	Contract Complete	Schedule
	Baseline	Changes	Schedule	Schedule Forecast	Variance
Contract	(07/2005)	(Months)	(10/2006)	(10/2006)	(Months)
East Span - Skyway	April 2007	8	December 2007	December 2007	-

Contract Status: The Skyway contract is currently in construction and is 93% complete as of October 20, 2006. The foundation work is complete with the exception of installing fenders around six of the pier footings. Five fenders have been completed; the remaining fender is scheduled to be completed by November 2006. The eastbound structure is 100% complete with the erection of all segments, while the westbound structure has erected 220 of the 226 segments (97%) with 6 segments remaining to be erected. A total of 446 segments (99%) have been installed to date. Erection activities are on hold until the Hinge BW pipe beams are installed (refer to diagram on page 13). The hinge pipe beams at hinge BW are scheduled for delivery in early December 2006. Bike path cantilever beam installation is complete and the installation of the panel segments is currently 76% complete. Two service platforms were delivered to the site and installation has started.

# **Contract Issues:**

Issue	Mitigating Action
KFM issued 15 NOPC's on behalf of USI for welding issues related to the fabrication of the Steel Orthotropic Box Girders (SOBG).	USI completed the fabrication of the SOBG. All NOPC's filed were recommended to be heard by the Dispute Review Board.

## Recent TBPOC Actions: none.

# **Contract Photographs**



Bike Path Railing



Dismantling Tower Crane at Pier 11

# **Contract Photographs Cont'd.**



Grinding the Eastbound Bridge Deck



Grouting on the westbound



Installing Service Platforms



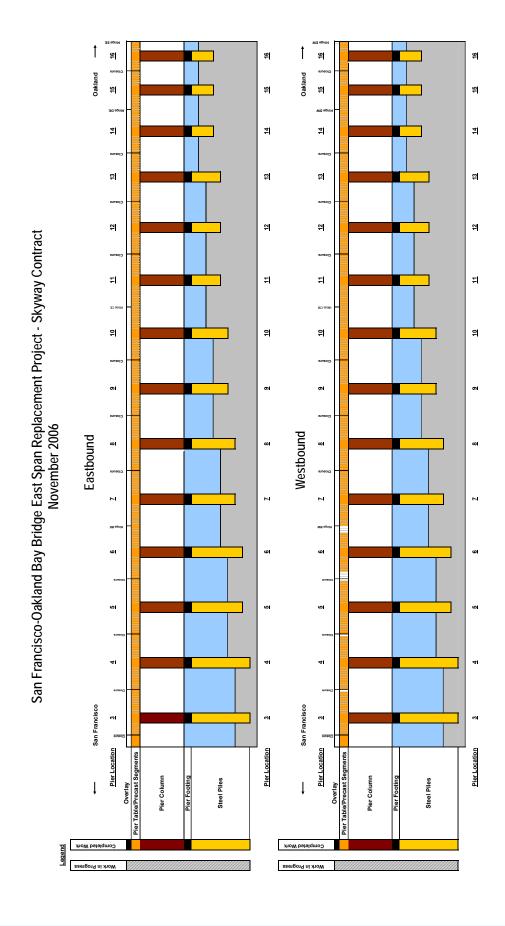
Preparing Service Platform for Installation



West end of the Skyway



West end of the Skyway



## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## ▶ Self-Anchored Suspension (SAS) Superstructure Contract

Contract Description: The Self-Anchored Suspension (SAS) Superstructure contract constructs a signature tower span between the skyway and the Yerba Buena Island transition structure. Work on the SAS bridge has been split between three contracts—the SAS Superstructure (under construction), the SAS E2/T1 Foundation (under construction), and the SAS W2 Foundation (completed).

**SAS Superstructure Cost Summary (\$Millions)** 

Contract a	AB 144 / SB 66 Budget (07/2005) B	Approved Changes c	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006) e	Cost Forecast (10/2006) f	Variance g = f - d
East Span - SAS Superstructure						
Capital Outlay Support	214.6	-	214.6	25.6	214.6	-
Capital Outlay Construction	1,753.7	-	1,753.7	143.9	1,767.4	13.7
TOTAL	1,968.3	-	1,968.3	169.5	1,982.0	13.7

Note: Details may not sum to totals due to rounding effects.

**SAS Superstructure Schedule Summary** 

Contract	AB 144/SB 66 Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
East Span - SAS Superstructure	March 2012	12	March 2013	March 2013	-

Contract Status: The contract is 10% complete as of October 20, 2006. The Contractor, American Bridge Fluor Enterprises, Inc., a Joint Venture (ABF), continues to mobilize staff to the field office on Pier 7. Development of various administrative submittals is continuing. Eight working drawings have been received for review. A draft baseline schedule submittal was received on October 31, 2006. Caltrans has rejected the schedule since it was an incomplete submittal but will still be reviewing it further and will forward comments to the Contractor. The Contractor is finalizing agreements with manufacturers, fabricators, suppliers and subcontractors, and signed a steel fabrication subcontract with Zhenhua Port Machinery Company (ZPMC), of Shanghai, China, on July 18, 2006. Pre-fabrication welding procedures and approval process are being developed at ZPMC.

The forecast \$13.7 million increase in construction costs on the SAS contract from the approved budget reflects actions taken to encourage additional bidders for the contract.

## Contract Issues:

Issue	Mitigating Action
Caltrans' Toll Bridge Seismic Retrofit Program Manager and East Span Replacement Project Manager have visited the ZPMC steel fabrication facilities in China and have identified the need for additional resources to monitor that work.	Caltrans and BATA are working together to set up facilities and to organize resources that will ensure an effective Owner's presence in the steel fabrication shops.
Potential for cost increases during construction due to steel plate conflicts. Applies to structural steel including the towers and box girders.	Establish Working Drawing Campus with Contractor to facilitate discussion about conflicts and meet regularly. Caltrans has constructed models and has identified conflicts, for which CCOs are to be prepared. Number of required mockups in the contract was reduced by addendum due to concerns about time for construction. Could continue to look at potential for mockups. Facilitated Cost Reduction Incentive Proposal (CRIP) sessions to discuss more changes and improvements at the beginning of the contract.

## Recent TBPOC Actions: None.

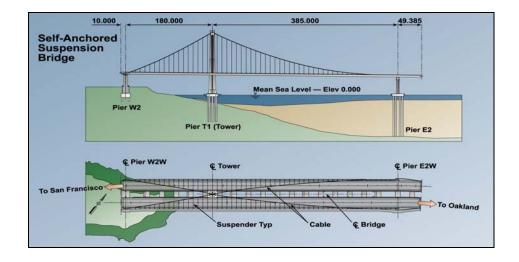
## **Contract Photographs**



SAS Superstructure Artist Rendition



View of the Western End of the Skyway Contract that will connect with the Future SAS Contract.



# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

# ▶ Self-Anchored Suspension (SAS) E2/T1 Foundations Contract

Contract Description: The Self-Anchored Suspension (SAS) E2/T1 Foundations contract constructs the main tower foundation at T1 and the adjacent east foundation at E2.

SAS E2/T1 Foundations Cost Summary (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes c	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006) e	Cost Forecast (10/2006) f	Variance g = f - d
East Span - SAS E2 / T1 Foundations						
Capital Outlay Support	52.5	-	52.5	15.7	52.5	-
Capital Outlay Construction	313.5	-	313.5	181.1	313.5	-
TOTAL	366.0	-	366.0	196.8	366.0	-

Note: Details may not sum to totals due to rounding effects.

SAS E2/T1 Foundations Schedule Summary

	AB 144/SB 66 Contract Completion Baseline	Approved Changes	Contract Complete Current Approved Schedule	Contract Complete Schedule Forecast	Schedule Variance
Contract	(07/2005)	(Months)	(10/2006)	(10/2006)	(Months)
East Span - SAS E2 / T1 Foundations	June 2008	(3)	March 2008	March 2008	-

Contract Status: The contract is 58% complete as of October 20, 2006. Pile driving for the E2 piles has been completed. Fabrication of the steel footing frame for Pier E2 was completed, delivered, and placed; welded connections will start in December 2006. Fabrication of steel pile top sections for CISS piles at E2 has been completed. Stabbing the cofferdam sheet piling started at E2.

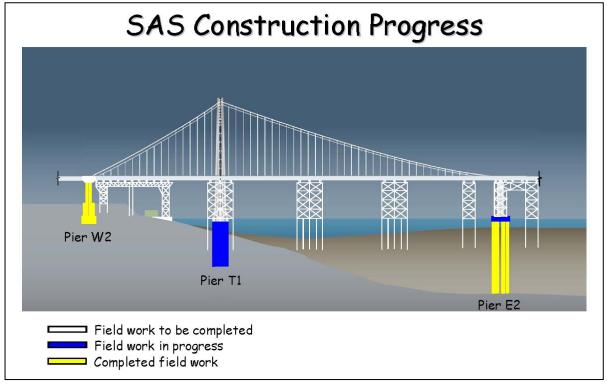
Fabrication of the permanent steel casings for the CIDH piles at T1 is approximately 40% complete. Fabrication of the T1 footing box is approximately 62% complete. Drilling the rock socket of the piles at T1 started.

#### **Contract Issues:**

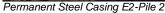
Issue	Mitigating Action
A differing site condition at a T1 rock socket which increased costs.	Contractor has similar experience from Benicia-Martinez Bridge. Contractor already has under reamer on site (from Benicia) and is part of the plan. Note that having E2/T1 footings as a separate contract is a risk mitigation measure for the SAS contract.

**Recent TBPOC Actions:** None.

# **Project Photographs**









Drill Stem going to E2 - Pile 2



Preparation to Lower E2-W bound Falsework



Lowering E2-W bound Falsework 1



Lowering E2-W bound Falsework 2



Pin holding E2-W bound falsework



E2-West Footing Box



Permanent Steel Casing E2-Pile 2

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## ► YERBA BUENA ISLAND (YBI)

#### SOUTH/SOUTH DETOUR CONTRACT

**Contract Description:** The Yerba Buena Island (YBI) South/South Detour (SSD) Contract constructs a temporary detour from the YBI tunnel to the existing east span of the Bay Bridge. This detour maintains traffic on the existing bridge while the YBI Transition Structure Contract completes the tie-in from the SAS to the existing tunnel.

YBI South/South Detour Cost Summary (\$Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes c	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance g = f - d
YBI South/South Detour						
Capital Outlay Support	29.5	-	29.5	17.1	29.5	-
Capital Outlay Construction	131.9	-	131.9	36.3	152.2	20.3
TOTAL	161.4	-	161.4	53.4	181.7	20.3

Note: Details may not sum to totals due to rounding effects.

YBI South/South Detour Schedule Summary

	AB 144/SB 66		Contract Complete		
	Contract Completion	Approved	Current Approved	Contract Complete	Schedule
	Baseline	Changes	Schedule	Schedule Forecast	Variance
Contract	(07/2005)	(Months)	(10/2006)	(10/2006)	(Months)
YBI South / South Detour *	July 2007	-	July 2007	TBD	TBD

<sup>\*</sup> Contract schedule under assessment. See Contract Issues below.

Contract Status: The contract work is 39% complete as of October 20, 2006. The viaduct portion of the contract is performance-based, whereby the Contractor is responsible for both the design and construction of viaduct structure. The West and East tie-in design work was taken over by Caltrans. TY Lin/Moffat Nichol, Joint Venture, has been tasked to design the East tie-in, and their team has mobilized. Caltrans will design the West tie-in. The contractor will still construct the tie-ins. To minimize impacts to the traveling public due to the current SAS schedule, the tie-in work has been suspended. This schedule is being evaluated; see Contract Issues. The contractor has remobilized and placed all the required SWPPP measures.

The suspension of the tie-in work has necessitated additional design enhancements to the viaduct segment to allow it to stand in place alone for a longer duration and to improve its seismic safety. The transfer of steel from the fabricator, Shanghai Grand Towers, Ltd. to Dongkuk S&C of South Korea has been completed. Shop drawings for the Viaduct structure are currently being prepared. Concurrently, Dongkuk S&C is in the process of preparing the Welding Quality Control Plan for approval.

A cost variance from the Current Approved Budget in the amount of 20.3 million is forecast for the SSD contract due to issues related to potential extension of the contract schedule integrate it with the SAS contract schedule; the cost impact of possible risks associated with the roll-out of a portion of the existing bridge structure and the roll-in of a replacement span at the East tie-in; and the impact of potential risks related to the demolition of the existing structure.

## **Contract Issues:**

#### Issue

**Mitigating Action** 

Delay to the SAS contract due to re-advertising and Addenda #5 and #7 to the SAS contract has impacts on the South/South Detour Contract.

The TBPOC approved a plan to continue with the currently programmed SSD structure (see Recent TBPOC Actions below). Various options concerning contract scope and schedule are being considered to efficiently complete this contract while integrating any future SAS schedule revisions.

The amount of contract delay is subject to analysis by Caltrans and negotiation with the Contractor. The projected delay to the SSD project is not expected to delay the overall open-to-traffic date for the East Span Replacement project, but is likely to have a significant impact to the SSD contract completion date.

Recent TBPOC Actions: In October 2006, the TBPOC approved a capital outlay construction forecast of \$152.2 million.

#### **Contract Photographs**



Project site looking east



Placing mat for crane at Trestle Bent 1



Stormwater Pollution Prevention installation



Stormwater Pollution Prevention installation at Goat Hill

# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## ► YERBA BUENA ISLAND (YBI)

#### • YBI TRANSITION STRUCTURE CONTRACTS

Contract Description: The YBI Transition Structure #1 Contract will construct the mainline YBI transition structures (YBITS). These will connect the SAS portion of the new bridge to the existing YBI tunnels and also includes all work required to place traffic onto the new bridge. The YBI Transition Structures #2 Contract includes demolition of the South/South Detour (SSD) temporary structure, completion of the new eastbound on-ramp, completion of the bike path section at YBI and reconstruction of local and affected facilities at YBI. The YBI Landscaping Contract includes slope restoration, vegetation restoration and plant maintenance for the areas affected by YBI construction.

**YBI Transition Structure Cost Summary (\$Millions)** 

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes c	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006)	Cost Forecast (10/2006) f	Variance g = f - d
YBI Transition Structure #1						
Capital Outlay Support	78.7	-	78.7	11.1	78.7	-
Capital Outlay Construction	299.3	-	299.3	-	318.5	19.2
TOTAL	378.0	-	378.0	11.1	397.2	19.2

Note: Details may not sum to totals due to rounding effects.

**YBI Transition Structure Schedule Summary** 

Contract	AB 144/SB 66 Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
YBI Transition Structure #1	November 2013	12	November 2014	November 2014	-

Contract Status: For the YBI Transition Structure #1 Contract, preparation of PS&E packages is currently underway. Decision on the SSD final design will impact design work on the YBI Mainline Structures contract. For the YBI Transition Structures #2 Contract, majority of the design work is complete. Preparation of detailed plans and quantity calculations are in progress. Design work on the existing viaduct retrofit is also in progress. A decision has been made to replace the viaduct as the retrofit strategy. Based on this decision, it is anticipated that the existing viaduct retrofit scope will be removed from the YBI Transition Structure #2 Contract and added as part of the SSD contract. For the YBI Landscaping Contract, a planting concept and preliminary plans have been developed for majority of the area. Determination of the extent of the U.S. Coast Guard area to be landscaped is still pending. Development of the final plans has not been completed.

#### **Contract Issues:**

**Recent TBPOC Actions: None** 

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### **▶ OAKLAND TOUCHDOWN**

#### OAKLAND TOUCHDOWN SUBMARINE CABLE RELOCATION CONTRACT

Contract Description: The OTD Submarine Cable Contract will replace the existing submarine electrical cable from Oakland to Treasure Island, and will be completed ahead of OTD Contract No. 1 to avoid possible construction conflicts.

Oakland Touchdown Submarine Cable Relocation Cost Summary (\$Millions)

<u>Contract</u> a	AB 144 / SB 66 Budget Approved (07/2005) Changes b c		Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006)	Variance g = f - d	
OTD Submarine Cable						
Capital Outlay Support	-	-	-	-	3.0	-
Capital Outlay Construction	-	-	-	-	9.6	-
TOTAL	-	-	-	-	12.6	-

Note: Details may not sum to totals due to rounding effects. The allocation of AB144/SB 66 budgets is proceeding. Budget amount is TBD. Overall OTD budgets and forecasts are shown on page 2.

Oakland Touchdown Submarine Cable Relocation Schedule Summary

Contract	AB 144/SB 66 Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
OTD Submarine Cable	TBD	-	July 2007	October 2007	3

Contract Status: This contract was advertised for bids on July 31, 2006. On September 19, 2006, Caltrans received a single bid of \$13.1 million for the San Francisco-Oakland Bay Bridge East Span Submarine Cable Relocation Contract, which is \$6.4 million (+97.2%) higher than the \$6.6 million engineer's estimate. The cable relocation project will place a new electrical cable between the East Bay and Treasure Island because the existing electrical cable providing power to the island is close to foundation work necessary for the construction of the Oakland Touchdown 1 contract, which is expected to advertise in early 2007. Caltrans has rejected the single bid. Caltrans has developed options that will quickly re-advertise the contract and will maximize the opportunity for competition while minimizing any schedule impact to the cable contract schedule. The TBPOC has reviewed and concurred with these options and also gave specific direction that all steps necessary be taken to maintain and even advance overall corridor schedule. On October 25, 2006, BATA authorized the BATA Executive Director to approve the release of the revised bid documents and specifications for the cable relocation project.

## **Contract Issues:**

Issue	Mitigating Action
Only one bid was received for the Oakland Touchdown Submarine Cable Relocation contract, and the bid amount was substantially over the Engineer's Estimate.	This contract will be re-bid.

Recent TBPOC Actions: In September 2006, the TBPOC directed various actions to either award the contract to the single bidder, or rebid it. In October 2006, the TBPOC has directed that this contract be re-advertised in a way that will maximize competition and maintain or advance the east span corridor schedule.

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## **▶ OAKLAND TOUCHDOWN**

## OAKLAND TOUCHDOWN #1 CONTRACT

**Contract Description:** The Oakland Touchdown #1 Contract includes construction of all marine foundations, westbound bridge section and roadway approach for the section that connects the new Skyway portion to the roadway west of the Oakland Toll Plaza. This contract also constructs the electrical substation and the eastbound detour roadway. Traffic will not be placed on the detour until later during OTD #2.

Oakland Touchdown #1 Cost Summary (\$Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes C	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006)	Cost Forecast (10/2006) f	Variance g = f - d
Oakland Touchdown #1						
Capital Outlay Support	-	-	-	-	49.9	-
Capital Outlay Construction	-	-	-	-	226.5	-
TOTAL	-	-	-	-	276.4	-

Note: Details may not sum to totals due to rounding effects. The allocation of AB144/SB 66 budgets is proceeding. Budget amount is TBD. Overall OTD budgets and forecasts are shown on page 2.

Oakland Touchdown #1 Schedule Summary

Outhand Todonaomin # 1	Concadio Cammay				
	AB 144/SB 66		Contract Complete		
	Contract Completion	Approved	Current Approved	Contract Complete	Schedule
	Baseline	Changes	Schedule	Schedule Forecast	Variance
Contract	(07/2005)	(Months)	(10/2006)	(10/2006)	(Months)
Oakland Touchdown #1	-	-	July 2009	October 2009	3

**Contract Status:** Design work is complete. Plans, Specifications, and Engineer's Estimate (PS&E) were submitted to the Office Engineer on September 1, 2006. Bid advertise date is scheduled in early 2007 and contract completion is scheduled in October 2009.

#### **Contract Issues:**

Issue	Mitigating Action				
Delays and cost increases due to conflicts from delays to the relocation of the submarine cable.	The department will be incorporating work-around specification language in the OTD 1 contact to mitigate delays due to the cable.				

**Recent TBPOC Actions:** In September 2006, the TBPOC approved the Plans, Specifications and Estimates for the OTD #1 contract. In October 2006, the TBPOC approved a capital outlay construction forecast of \$226.5 million.

## San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### **▶ OAKLAND TOUCHDOWN**

#### OAKLAND TOUCHDOWN #2 CONTRACT

Contract Description The Oakland Touchdown #2 Contract includes construction of the remaining eastbound bridge section and roadway approach for the section that connects the new Skyway portion to the roadway west of the Oakland Toll Plaza. This work would occur once the westbound traffic is shifted onto the new SAS.

Oakland Touchdown #2 Cost Summary (\$Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes c	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance g = f - d
Oakland Touchdown #2						
Capital Outlay Support	-	-	-	-	15.8	-
Capital Outlay Construction	-	-	-	-	62.0	-
TOTAL	-	-	-	-	77.8	-

Note: Details may not sum to totals due to rounding effects. The allocation of AB144/SB 66 budgets is proceeding. Budget amount is TBD. Overall OTD budgets and forecasts are shown on page 2.

Oakland Touchdown #1 Schedule Summary

Contract	AB 144/SB 66 Contract Completion Baseline	Approved Changes	Contract Complete Current Approved Schedule	Contract Complete Schedule Forecast	Schedule Variance
Contract	(07/2005)	(Months)	(10/2006)	(10/2006)	(Months)
Oakland Touchdown #2	-	-	November 2014	November 2014	-

Contract Status: Design work for the structures portion of OTD Contract No. 2 is complete and will be advertised as scheduled in 2010 in time for SAS opening.

Contract Issues: None

**Recent TBPOC Actions:** None

# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

#### **▶ OTHER MAJOR CONTRACTS**

**Contract Description:** Other Major Contracts include the Stormwater Treatment Measures contract, which will implement best practices for stormwater runoff treatment at the SFOBB toll plaza; the Oakland Touchdown Electrical Systems Contract, which will incorporate most of the electrical elements from OTD as well as from other segments of the East Span; and the Existing Bridge Demolition contract, which will include the complete removal of the existing 1936 east span following the opening of the new bridge.

Other Major Contracts Cost Summary (\$Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance
A	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	238.8	-	238.8	39.2	256.5	17.7
Capital Outlay Construction						-
Existing Bridge Demolition	239.2	-	239.2	-	222.0	(17.2)
Stormwater Treatment Measures	15.0	-	15.0	4.4	15.0	-
Total Capital Outlay Construction	254.2	-	254.2	4.4	237.0	(17.2)
TOTAL	493.0	-	493.0	43.6	493.5	0.5

Note: Details may not sum to totals due to rounding effects.

**Other Major Contracts Schedule Summary** 

Contract	AB 144/SB 66 Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)	% Design Comp.
Existing Bridge Demolition	September 2014	12	September 2015	September 2015	-	10
Stormwater Treatment Measures	March 2008	-	March 2008	June 2007	(9)	N/A

#### **Contract Status:**

**Stormwater Treatment Measures:** The Contractor is Diablo Constructors. The current schedule forecast reflects the actual award date that was earlier than planned plus a reduced construction contract duration that was shown in the Contractor's bid. The contract is 31% complete as of October 20, 2006.

Work continues on installation of drainage structures at the Distribution Structure and along Radio Road; and installation of pump stations. Work has been delayed due to nesting birds, buried manmade objects, unidentified utilities, and discovery of unsuitable materials.

**Oakland Touchdown Electrical Systems:** Determination of contract scope is underway. Caltrans is also considering the option of incorporating this work into the Oakland Touchdown #2 contract.

Bridge Demolition: Design is 10% complete. Design work has been temporarily suspended to assign engineering resources to higher priority tasks, and will resume at a later time. The contract schedule completion date has been extended by 12 months due to a 12-month SAS contract extension. The \$17.2 million decrease in construction costs for the Existing Bridge Demolition contract is due to a re-evaluation of cost escalation rates for the contract.

Contract Issues: None

**Recent TBPOC Actions:** None

## **Contract Photographs**



Inlet Structure 1B



Metal Beam Guard Rail at Pump Station 1A



Install Bypass Structure 1B

# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project

## **▶ OTHER COMPLETED CONTRACTS AND RELATED WORK**

**Summary Description:** Substantial work has already been performed on the SFOBB East Span Replacement project to facilitate construction of the mainline construction contracts.

Other Contracts and Related Work Cost Summary (\$Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes c	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance g = f - d
Capital Outlay Support	227.0	-	227.0	209.0	227.0	-
Right-of-Way and Environmental Mitigation	72.4	-	72.4	38.8	72.4	-
Capital Outlay Construction						-
SAS W2 Foundations	26.4	-	26.4	25.1	26.4	-
YBI/SAS Archeology	1.1	-	1.1	1.1	1.1	-
YBI - USCG Road Relocation	3.0	-	3.0	2.8	3.0	-
YBI - Substation and Viaduct	11.6	-	11.6	11.3	11.6	-
Oakland Geofill	8.2	-	8.2	8.2	8.2	-
Pile Installation Demonstration Project	9.2	-	9.2	9.2	9.2	-
Existing East Span Retrofit	30.8	-	30.8	30.8	30.8	-
Total Capital Outlay Construction Completed	90.3	-	90.3	88.5	90.3	-
TOTAL	389.7	-	389.7	336.3	389.7	-

Note: Details may not sum to totals due to rounding effects.

Other Contracts and Related Work Schedule Summary

Project	Actual Project Completion Date
Existing East Span Retrofit	March 1998
Interim Retrofit	July 2000
Pile Installation Demolition Project	December 2000
YBI / SAS Archaeology	January 2003
Oakland Geofill	April 2003
YBI – USCG Road Relocation	June 2004
SAS W2 Foundations	October 2004
YBI Substation and Viaduct	May 2005

**Summary Status:** Construction has been completed on the above listed contracts. Caltrans continues to work with various environmental agencies to conduct compliance inspections and monitor and mitigate any environmental impacts from the project.

Contract Issues: None.

Recent TBPOC Actions: None.

# San Francisco-Oakland Bay Bridge (SFOBB) West Approach Replacement Project

Project Description: The SFOBB West Approach Replacement Project will replace the entire west approach structure from 5<sup>th</sup> Street to the west anchorage of the existing west spans of the SFOBB while maintaining existing traffic lanes for the weekday commute.

**SFOBB West Approach Replacement Cost Summary (\$Millions)** 

Project a	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance g = f - d
West Approach						
Capital Outlay Support	120.0	-	120.0	84.9	120.0	-
Capital Outlay Construction	309.0	-	309.0	215.5	309.0	-
TOTAL	429.0	-	429.0	300.4	429.0	-

Note: Details may not sum to totals due to rounding effects.

**SFOBB West Approach Replacement Schedule Summary** 

	AB 144/SB 66 Project Completion Baseline	Approved Changes	Project Complete Current Approved Schedule	Contract Complete Schedule Forecast	Schedule Variance				
Project	(07/2005)	(Months)	(10/2006)	(10/2006)	(Months)				
West Approach	August 2009	-	August 2009	August 2009	-				

Project Status: Construction is 73% complete as of October 20, 2006. Seismic retrofit construction is continuing throughout the project. Major ongoing work during October included continuation of work on the next phase of piles for the permanent eastbound I-80 mainline structures, the 5th Street and Harrison Street ramps, the 4th street retrofit work, and falsework erection for Frame 8U (South) and the ST6D alignment. Beale Street was opened to vehicular traffic on October 30, 2006.

#### **Project Issues:**

Issue	Mitigating Action
Pile investigation and testing for the identification of pile anomalies must be completed in a timely manner so as to avoid construction impact.	Caltrans Construction coordinates closely with Structure Design and METS daily on pile investigation and testing issues, and proactively monitors this effort. Tracking of the testing effort is done for each individual pile. Team participation in Risk Management meetings has proven to be valuable in addressing this issue.

Recent TBPOC Actions: In August 2006, the TBPOC approved the CCO in the amount of \$4.5 million for the demolition of Frames 7U (South), 8U (South), and portion of 6U, which occurred during Labor Day weekend 2006.

# **Project Photographs**



West Approach Progress Photo 1



West Approach Progress Photo 2



West Approach Progress Photo 3



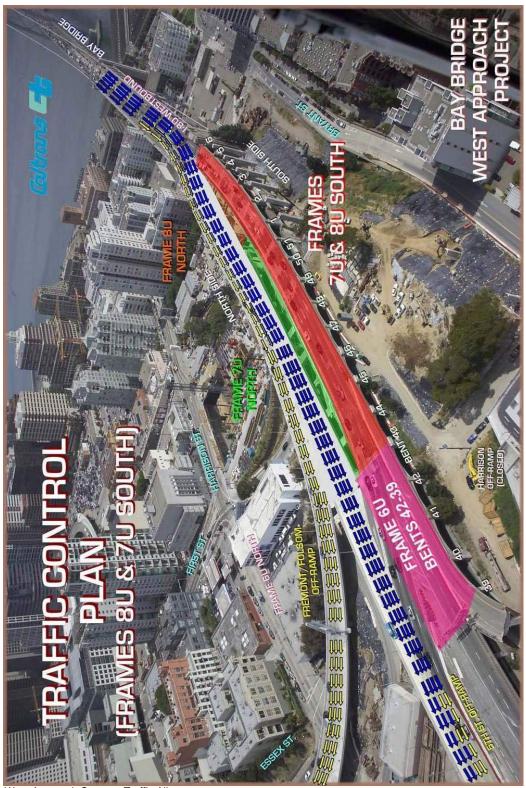
West Approach Progress Photo 4



West Approach Progress Photo 5



West Approach Progress Photo 6



West Approach Contract Traffic Alignment

#### Toll Bridge Seismic Retrofit Program

#### Richmond-San Rafael Bridge (RSRB) Seismic Retrofit Project

**Project Description:** The Richmond-San Rafael (RSR) Bridge Seismic Retrofit Project strengthened the existing bridge to withstand the effects of a large seismic event. As part of the retrofit work, Caltrans performed work to strengthen the bridge foundations, replace the existing west trestle and the main channel fenders, and complete the joint rehabilitation of the bridge deck. (The RM1 work is reported in the RM1 section of the report).

#### RSRB Seismic Retrofit Cost Summary (\$Millions)

Project a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes C	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006) e	Cost Forecast (10/2006) f	Variance g = f - d
RSRB Seismic Retrofit						
Capital Outlay Support	134.0	(7.0)	127.0	125.6	127.0	-
Capital Outlay Construction	780.0	(82.0)	698.0	665.6	698.0	-
TOTAL	914.0	(89.0)	825.0	791.2	825.0	-

Note: Details may not sum to totals due to rounding effects.

#### **RSRB Seismic Retrofit Schedule Summary**

Project	AB 144/SB 66 Project Completion Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
RSRB Seismic Retrofit	August 2005	-	August 2005	October 2005	2
RSRB Public Access Project	NA	-	May 2007	May 2007	-

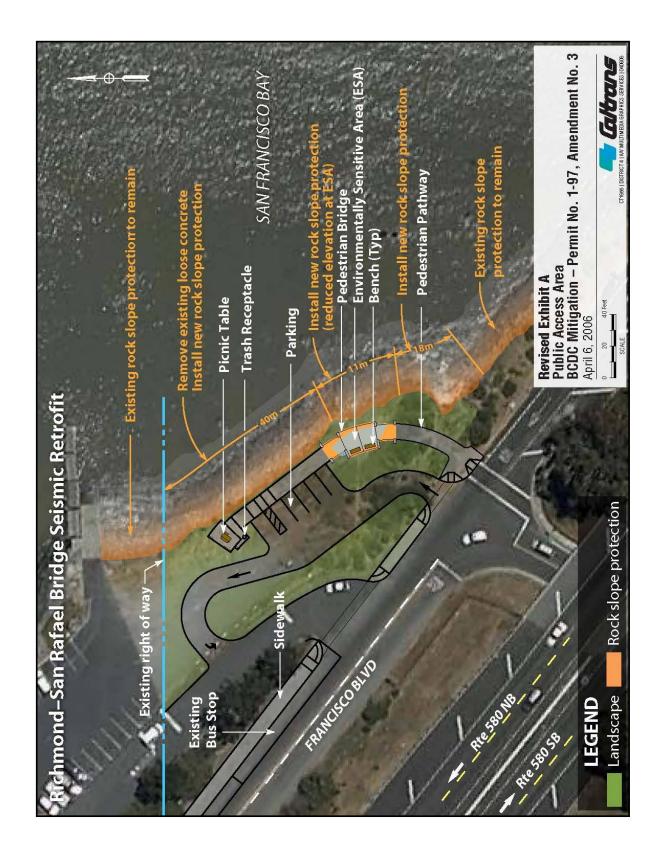
**Project Status:** The retrofit construction contract was completed and accepted on October 28, 2005. Project savings in the amount of \$89 million has been transferred to the program contingency in October 2006.

Caltrans has submitted the project plans and specifications for a public access lot on the Marin side of the bridge to comply with a Bay Conservation and Development Commission (BCDC) permit condition (see the exhibit on page 32). It was advertised on October 2, 2006 and bids were opened on November 1, 2006. Seven bids were submitted with Ghilloti Bros. Inc., submitting the apparent lowest A+B bid of \$1,005,863.40, as compared with the Engineer's Estimate of \$1,072,157.25.

Contract Issues: None.

Recent TBPOC Actions: None.

<sup>\*</sup> The seismic retrofit contract included work to rehabilitate the bridge deck joints. Although the deck joint work was funded from RM1 toll funds, the work is also eligible for Toll Bridge Seismic Retrofit Program funding. In July 2005, BATA rescinded \$16.9 million in RM1 funds for the deck joint work to make additional RM1 funds available for the New Benicia-Martinez Bridge Project. An equivalent amount of seismic funds will be used on the deck joint work, which is included in the budget above.



#### Toll Bridge Seismic Retrofit Program

#### Other Completed Seismic Retrofit Projects

**Summary Description:** Caltrans has already completed the seismic retrofits of the West Spans of the SFOBB, the existing 1958 Carquinez Bridge, the existing Benicia-Martinez Bridge, the San Mateo-Hayward Bridge, and two former toll bridges in southern California.

Other Completed Seismic Retrofit Projects Cost Summary (\$Millions)

Project a	AB 144 / SB 66 Budget (07/2005) b	Approved Changes c	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance g = f - d
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit Project	307.9	-	307.9	301.0	307.9	-
Carquinez Bridge Retrofit Project	114.2	-	114.2	114.2	114.2	-
Benicia-Martinez Bridge Retrofit Project	177.8	-	177.8	177.8	177.8	-
San Mateo-Hayward Bridge Retrofit Project	163.5	-	163.5	163.4	163.5	-
Vincent Thomas Bridge Retrofit Project	58.5	-	58.5	58.4	58.5	-
San Diego-Coronado Bridge Retrofit Project	103.5	-	103.5	102.6	103.5	-
TOTAL	925.4	-	925.4	917.4	925.4	-

Note: Details may not sum to totals due to rounding effects. Capital Outlay Support and Capital Outlay have been combined.

Other Completed Seismic Retrofit Projects Schedule Summary

Project	Actual Project Completion Date
Vincent Thomas Bridge Retrofit	May 2000
San Mateo-Hayward Bridge Retrofit	June 2000
Carquinez Bridge Retrofit	January 2002
San Diego-Coronado Bridge Retrofit	June 2002
Benicia-Martinez Bridge Retrofit	August 2002
SFOBB West Span Seismic Retrofit	June 2004

**Summary Status:** Construction has been completed on the above-listed projects. The Estimate at Completion amounts shown above include allowances for minor project closeout costs.

Contract Issues: None.

Recent TBPOC Actions: None.

# Toll Bridge Seismic Retrofit Program

#### Other Toll Bridges

#### **Dumbarton and Antioch Bridges**

The original design of the Dumbarton and Antioch Bridges were based on design criteria developed after the 1971 San Fernando Earthquake. In the early 1990's, Caltrans determined that these two structures had the seismic resistant features required by the post 1971 codes and were not likely to be vulnerable during a major seismic event. Since that time, Caltrans has pursued an aggressive seismic research program. Based on the results of this program, Caltrans significantly revised its seismic design practice in the late 1990's. Consistent with recommendations by the Caltrans Seismic Advisory Board, Caltrans regularly reassesses the seismic risk and performance of its bridges. Due to the tremendous changes in seismic design practice that have occurred since the design of the Dumbarton and Antioch bridges, a comprehensive assessment of the potential need and scope for seismic retrofit based on current knowledge is advised.

#### **Previous Reports**

A number of limited studies have been made of these bridges in the past. However, none of the studies have fully assessed the seismic performance of the structures under current standards.

#### **Vulnerability Studies**

In late 2004, Caltrans initiated vulnerability studies on the Dumbarton and Antioch bridges. The purpose of these studies was to determine if the bridges would meet current seismic performance standards. The studies were essentially completed in May 2005. They were not complete global analyses, but rather investigations of selected bents modeled as independent structures. The analyses were limited in scope and based on as-built plans and currently available geotechnical information. The superstructure response was not analyzed.

The Dumbarton and Antioch Bridges have many seismic resistant features, and the results of the vulnerability studies indicate that the bridges should perform well in a moderate seismic event. However, during a major seismic event, some potential vulnerabilities (summarized below) become apparent.

- Foundation response generally governs performance. The piles may plunge axially and potentially cause permanent footing rotations.
- Potentially large foundation displacements and rotations may result in deformations that can't be easily repaired.
- The capacity of the ductile columns is greater than those of the bent cap, pile cap, pile and superstructure. As a result, the latter elements may be damaged in a major event, especially if the foundation is retrofitted.

Given the limitations of the studies, there was insufficient evidence to conclusively determine the performance of the bridges during a maximum credible earthquake (MCE). While the Dumbarton and Antioch bridges may meet performance standards, a more comprehensive technical study is necessary to understand the performance of these structures during an MCE event. A study of this level is necessary to accurately determine the structures' response and to develop any necessary retrofit strategies. A comprehensive geotechnical study using the latest analysis techniques is likely necessary in order to perform this level of analysis.

#### **Sensitivity Analysis**

As a follow-up to the Vulnerability Study, a sensitivity analysis was completed on a single representative bent used in the Vulnerability Study (Bent 23 of the Dumbarton Bridge). The goal of the analysis is to determine the structural response associated with uncertainties in the geotechnical data. An envelope of soil conditions (best-case and worst-case scenarios) was used in the analysis. The results of the Sensitivity Analysis will be used to determine the scope and value of conducting further geotechnical studies.

The preliminary results from the sensitivity analysis indicate that the seismic response of the bridge is largely dependant on the soil conditions and that a comprehensive geotechnical investigation is essential for understanding the bridge's performance during a major seismic event. A work plan was developed to assess the extent of geotechnical work needed for a refined seismic analysis and to assess the required performance levels for each structure. Caltrans has completed the value analysis to scope the geotechnical investigation that will be required to complete the strategy. The final report was issued on July 24, 2006.

#### **Cost and Schedule**

A preliminary cost estimate, schedule, and initial risk analysis have been developed to complete a comprehensive seismic analysis for each bridge. The preliminary estimate and schedule were developed as a baseline that assumed a complete geotechnical and geophysical investigation would be required at each bridge.

At its June 14, 2006 meeting, the Bay Area Toll Authority (BATA) approved the \$17.8 million that is necessary to proceed with this comprehensive seismic analysis. The BATA Oversight Committee selected Earth Mechanics as the Consultant for the Phase 1 Geotechnical Investigation at their September 13, 2006 meeting. BATA entered into a contract with the Consultant on September 26, 2006. The geotechnical and geophysical investigation began on November 6, 2006.



Antioch Bridge



Dumbarton Bridge



#### **PROJECT / CONTRACT REPORTS**

# Regional Measure 1 Program

New Benicia-Martinez Bridge Project Summary

- New Benicia-Martinez Bridge Contract
- Other Contracts and Related Project Activities

New Carquinez Bridge Project

Richmond-San Rafael Bridge Deck Overlay Project

Interstate 880 / State Route 92 Interchange Reconstruction

Other Completed Regional Measure 1 Projects

- San Mateo-Hayward Bridge Widening Project
- Richmond Parkway Project
- Bayfront Expressway Widening Project
- Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Project

#### New Benicia-Martinez Bridge Project Summary

**Project Description:** The new Benicia-Martinez Bridge project constructs a new parallel bridge just east of the existing bridge. The project will include reconstructed interchanges to the north and south of the bridges and a new toll plaza and administration building in Martinez.

**New Benicia-Martinez Bridge Project Cost Summary (\$Millions)** 

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	157.1	24.8	181.8	159.2	181.8	-
Right-of-Way and Others	20.4	(0.1)	20.3	12.3	20.3	-
Capital Outlay						-
New Bridge	672.0	107.3	779.3	707.5	779.3	-
I-680/I-780 Interchange Replacement	76.3	16.1	92.4	80.4	92.4	-
I-680/Marina Vista Interchange Reconstruction	51.5	8.1	59.6	54.7	59.6	-
New Toll Plaza	24.3	2.0	26.3	22.0	26.3	-
Existing Bridge & Interchange Modifications	17.2	10.9	28.1	-	28.1	-
Other	20.3	(1.3)	19.0	15.2	19.0	-
Project Reserve	20.8	35.3	56.2	-	56.2	0.0
TOTAL	1,059.9	203.1	1,263.0	1,051.3	1,263.0	0.0

Note: Details may not sum to totals due to rounding effects.

**New Benicia-Martinez Bridge Project Schedule Summary** 

Contract	BATA Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
I-680/Marina Vista Interchange Reconstruction	March 2006	1	April 2006	April 2006	-
New Toll Plaza	June 2006	-	June 2006	December 2006	6
New Benicia-Martinez Bridge	December 2007	-	December 2007	December 2007	-
I-680/I-780 Interchange Replacement	December 2007	-	December 2007	February 2008	2
Open to Traffic	December 2007	-	December 2007	December 2007	-
Existing Bridge & Interchange Modifications	December 2009	-	December 2009	December 2009	-

<sup>\*</sup>See page 45 for an explanation of change in schedule forecast.

<sup>\*</sup> The budget and estimate at completion includes approximately \$33 million in non-toll bridge funds (Proposition 192 and SHOPP).

**Project Status:** All major construction projects necessary to open the bridge are currently in construction. Numerous foundation and superstructure issues have significantly delayed the new bridge contract. See the following contract detail pages for more information. Note that the remaining expenditures required on the "Right-of-Way and Others" category represent environmental permitting and mitigation.

#### **Project Issues**

#### Issue

#### Mitigating Action

To open the bridge, Caltrans must coordinate opening and closeout activities among the different contractors that will be active on the project. These activities, including structural bridge and electrical tie-ins, have been complicated by the delays to the new bridge. As identified in Caltrans Risk Management Plan, these delays may also further escalate support and material costs on the project.

Based on the Caltrans Risk Management Plan, BATA has budgeted a program contingency to fund these potential increases. Caltrans is also completing a comprehensive schedule of all activities necessary to open the new bridge to traffic. As necessary, Caltrans will be negotiating with their contractors to resolve any final opening and close-out activities to open the bridge.

**Recent TBPOC Actions:** See the following contract detail pages for more information. **Project Photographs** 



Benicia-Martinez Toll Plaza Canopy Progress Photo 1



Benicia-Martinez Toll Plaza Canopy Progress Photo 2



Operations Building & Courtyard looking west



Toll Plaza Administration Building

#### **Project Photographs Cont'd.**



Aerial Photo of the Benicia-Martinez Bridges



Benicia-Martinez Progress Photo 1



Benicia-Martinez Progress Photo 2



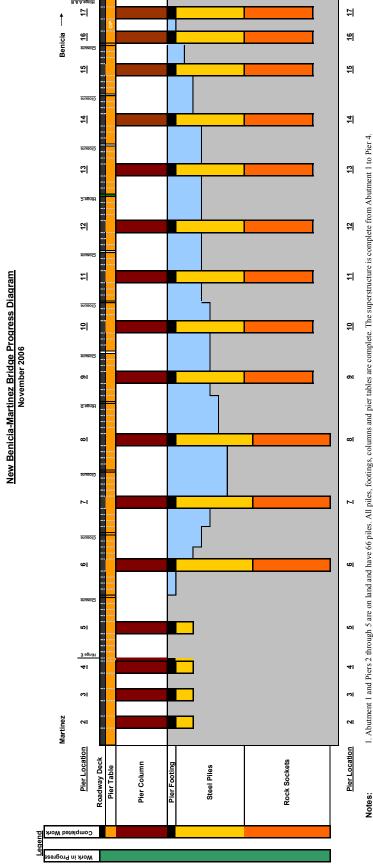
Benicia-Martinez Progress Photo 3



Benicia-Martinez Progress Photo 4



Benicia-Martinez Progress Photo 5



Piers 6 through 17 are located in the water and have 8 to 9 piles and rock sockets each - a total of 99. All 99 piles have been driven to their required depth and all 99 rock sockets have been installed.

3. Piers 6 through 17 have two-part footings. Piers 6, 16 and 17 have a cast-on-location tower section and a cast-in-place (CIP upper section, which are lowered onto the piles. All three footings are complete. Piers 7 through 15 have a precast lower section that is set on the piles and a cast-in-place (CIP) upper section. All nine precast footings have been set and all CIP footings are complete.

4. All Stage 2 footings have been poured and stressed.

5. All pier tables are complete as of the end of May 2006.

6. Piers 4 through 15 have 344 cast-in-place cantilevered superstructure segments. All of the three-hundred and forty-four (344) segments (100%) have been cast to-date. Hinges A, B, E and D are completed and Hinge C is still in progress. Five span closures (5, 6, 7, 10 and 15) have been poured. Four span closures remain to be done.

7. The cast-in-place on falseworks superstructure south of Pier 4 is substantially complete, except for the bridge deck repair work, which are still to be done. The structure north of Pier 15 is substantially complete, including the lower and the upper hinge seats at Hinges A and B.

#### New Benicia-Martinez Bridge Project

#### ▶ NEW BENICIA-MARTINEZ BRIDGE CONTRACT

**Contract Description:** The new bridge contract constructs a new cast-in-place segmentally constructed reinforced concrete bridge just east of the existing bridge. The new bridge will carry five lanes of eastbound I-680 traffic towards Benicia.

New Benicia-Martinez Bridge Cost Summary (\$Millions)

Contract a	BATA Budget (07/2005) b	Approved Changes c	Current Approved Budget (10/2006) d = b + c	Cost To Date (10/2006) e	Cost Forecast (10/2006) f	Variance g = f - d
New Benicia-Martinez Bridge						
Capital Outlay Support	84.9	7.7	92.6	80.3	92.6	-
Capital Outlay Construction	672.0	107.3	779.3	707.5	779.3	-
TOTAL	756.9	115.0	871.9	787.8	871.9	-

Note: Details may not sum to totals due to rounding effects.

New Benicia-Martinez Bridge Schedule Summary

Contract	BATA Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
New Benicia-Martinez Bridge	December 2007	-	December 2007	December 2007	-

Contract Status: The contract is 90% complete based on the current revised schedule. All substructure and column work have been completed. Superstructure work continues throughout the project. For the cast-in-place portion of the bridge over the straits (Frames 2 and 3), all 11 of the pier tables and all 344 segments have been completed. Hinge E, connecting Frames 4 and 3 between Piers 4 and 5; Hinge D, connecting Frames 2 and 3 between Piers 8 and 9, and Hinges A & B, connecting Frame 1 with the C. C. Myers, Inc. I-680/780 connector bridges, have been completed. Hinge C construction is still in progress and will continue through December 2006. Concrete closure pours on Spans 5, 6, 7, 10 and 15 of the New Benicia-Martinez Bridge, which links the individual piers together into a frame, have been completed. Only four (4) span closures remain to be done.

For the cast-on-falsework structures (Frames 1 and 4), work on Frame 4 on the south side of the straits is complete. Polyester concrete patches will be needed on the bridge deck around Pier 3, due to poor quality of surface concrete after grinding. A repair plan submittal for the polyester concrete patches has been reviewed but will not be approved until additional information and testing can be performed. On Frame 1, the structure is complete and has been stressed. Work continued on removal of falsework piles, a coffer dam at pier 16, and the north trestle.

Other on-going project work includes work on the interior and exterior finishes at Piers 6, 8 and 11, installation of rails and maintenance travelers, and installation of pier table fixed platform beams at various piers.

Consistent with BATA's Fastrak strategic plan, plans are progressing for the implementation of open road tolling at the toll plaza, which will involve the demolition of the toll booths. Contract documents for the Benicia-Martinez Open Road Tolling (ORT) work were transmitted to Caltrans on September 25, 2006. The documents were consolidated with the traffic opening work documents for the new bridge, and issued to Kiewit Pacific for cost proposal on October 6, 2006. It is anticipated that the contractor's cost proposal will be submitted on or before November 17, 2006.

Contract Issues: None

**Recent TBPOC Actions:** None

#### New Benicia-Martinez Bridge Project Summary

#### ▶ OTHER CONTRACTS AND RELATED PROJECT ACTIVITIES

**Contract Description:** Contracts related to the new Benicia-Martinez Bridge project involve the construction of a new toll plaza south of the new bridge in Contra Costa County with 17 toll booths, including two high-occupancy vehicle (HOV) bypass lanes, and the reconstruction of the I-680/Marina Vista Road and I-680/I-780 interchanges.

Other Contracts and Related Activities Cost Summary (\$Millions)

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance
a	b	С	d = b + c	е	f	g = f - d
Capital Outlay Support	72.2	17.0	89.2	78.9	89.2	-
Right-of-Way and Environmental Mitigation	20.4	(0.1)	20.3	12.3	20.3	-
Capital Outlay Construction						
I-680/I-780 Interchange Replacement	76.3	16.1	92.4	80.4	92.4	-
I-680/Marina Vista Interchange Reconstruction	51.5	8.1	59.6	54.7	59.6	-
New Toll Plaza	24.3	2.0	26.3	22.0	26.3	-
Existing Bridge & Interchange Modifications	17.2	10.9	28.1	-	28.1	-
Others	20.3	(1.3)	19.0	15.2	19.0	-
Total Capital Outlay Construction	189.6	35.8	225.4	172.3	225.4	-
TOTAL	282.2	52.7	334.9	263.5	334.9	-

Note: Details may not sum to totals due to rounding effects.

Other Contracts and Related Activities Schedule Summary

Contract	BATA Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
I-680/Marina Vista Interchange Reconstruction	March 2006	1	April 2006	April 2006	-
New Toll Plaza	June 2006	-	June 2006	December 2006	6
I-680/I-780 Interchange Replacement	December 2007	-	December 2007	February 2008	2
Existing Bridge & Interchange Modifications	December 2009	-	December 2009	December 2009	-

#### **Contract Status:**

Toll Plaza and Administration Building: The contract remains at 95% complete based on contractor payment. The Contractor is continuing work throughout the toll plaza area. At the Operations Building, the Contractor continued testing of the security camera system, and correction work on the architectural punch list. At the Toll Plaza, work continued on the installation of ATCAS equipment at the canopy. Work continued at the Courtyard, which included, fascia panel installation at the Retaining Wall No. 3, installation of light sconces, security cameras and down lights. A number of notices of potential claim that have been filed by the Contractor remain to be resolved, but this will have no impact on the bridge Opento-Traffic date. Resident Engineer's estimated date for completion is now forecast for December 15, 2006.

**I-680/I-780 Interchange:** The contract is approximately 95% complete based on the current revised schedule. To-date, all of the bridge structures are substantially complete, except for barrier rails works. Work on the Drainage System 17 continued. The electrical sub-contractor, Bleyco, continued to install cable tray in the Benicia-Martinez Approach Structure (Br. No. 23-0215R). Final electrical work for the new Benicia-Martinez Bridge and the interchange will not be completed until after the new bridge is complete.

I-680/Marina Vista Interchange: The contract is 100% complete as of April 28, 2006, and has been accepted by Caltrans. The Contractor received the Proposed Final Estimate (PFE) on August 14, 2006 for review and acceptance. Caltrans received the PFE letter from the Contractor on September 13, 2006, with a list of exceptions (claims) to the PFE. A semi-final estimate was run on October 11, 2006 to compensate for all the issues that Caltrans determined to have merits in the list of exceptions to the PFE. At the same time, the Department responded to the exception list on October 12, 2006. Those issues that are not resolved in the semi-final estimate are currently being reviewed and negotiated for further determination of merit, with possible issuance of another semi-final estimate.

Wetland Mitigation: The contract is 100% complete. The Contract Completion Acceptance (CCA) was submitted to Caltrans Headquarters for their approval on March 3, 2006. The Proposed Final Estimate (PFE) has been reviewed and accepted by the Contractor.

**Contract Issues:** None

Recent TBPOC Actions: In September 2006, the TBPOC approved the commencement of negotiations on a CCO to cover ORT work and other work required to open the bridge to traffic.

#### New Carquinez Bridge Project

**Project Description:** The new Carquinez Bridge project involves constructing a new suspension bridge west of the existing bridges with four westbound lanes and a bicycle/pedestrian lane and demolishing the existing 1927 bridge.

**New Carquinez Bridge Cost Summary (\$Millions)** 

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance
a	b	С	d = b + c	e	f	g = f - d
Capital Outlay Support	124.4	(1.1)	123.3	117.5	123.2	(0.1)
Capital Outlay Construction						
Replacement Bridge	253.3	4.0	257.3	256.9	257.3	-
South Interchange Reconstruction	73.9	-	73.9	71.9	73.9	-
Existing 1927 Bridge Demolition	35.2	-	35.2	21.0	35.2	-
Other	29.3	(0.7)	28.6	25.2	28.4	(0.2)
Project Reserve	12.1	(2.2)	9.9	-	10.2	0.3
TOTAL	528.2	-	528.2	492.5	528.2	(0.0)

Note: Details may not sum to totals due to rounding effects.

**New Carquinez Bridge Schedule Summary** 

Contract	BATA Contract Completion Baseline (07/2005)	Approved Changes (Months)	Contract Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
New Carquinez Bridge	November 2003*	-	November 2003*	November 2003*	-
1927 Carquinez Bridge Demolition	December 2007	-	December 2007	December 2007	-
Landscaping	August 2011	-	August 2011	August 2011	-

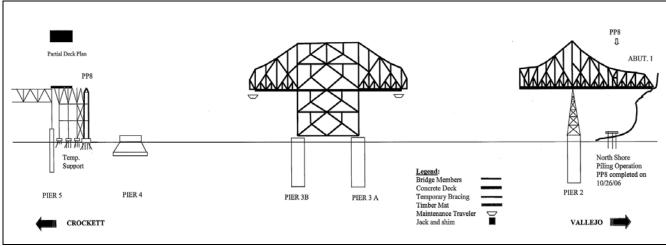
<sup>\*</sup> The date shown is for the opening of the bridge to traffic.

**Project Status:** The new replacement bridge and all its approaches have been completed and opened to traffic. The demolition contract to remove the 1927 bridge is approximately 55% complete based on schedule. However, based on payment, this contract is 70% complete in that the greatest pay items involved the 1958 bridge approach deck replacement, which has been completed. To-date, demolition of Units 1, 2, 3 and 7 of the 1927 bridge have been completed. Demolition work has been resumed at Units 4 and 6. Unit 9 panel point 8 foundation has been installed. Falsework for Unit 1 will be removed and relocated to Unit 9. The demolition of the 1927 bridge approach structure will be started this month for a duration of 6 months.

#### **Project Issues:**

#### Issue Mitigating Action Contractor has not yet formally stated the schedule impact of the Caltrans will continue to communicate to the Contractor the need 3-month work suspension related to the unanticipated buckling to submit the TIA. Caltrans will then evaluate it to establish a of eye bars during the demolition of Units 3 and 7. basis for negotiations. The resulting CCO should have no impact to the contract or overall project budget.

#### **Project Photographs**



1927 Carquinez Bridge Demolition Progress Status as of October 31, 2006



Carquinez Bridge Progress Photo 1



Carquinez Bridge Progress Photo 2



Carquinez Bridge Progress Photo 3



Carquinez Bridge Progress Photo 4



Carquinez Bridge Progress Photo 5



Carquinez Bridge Progress Photo 6



Carquinez Bridge Progress Photo 7



Carquinez Bridge Progress Photo 8

#### Richmond-San Rafael Bridge (RSRB) Deck Overlay Project

Project Description: Rehabilitate the existing concrete deck on the bridge, damaged due to traffic and exposure to a marine environment.

**RSRB Deck Overlay Cost Summary (\$Millions)** 

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance
a	b	С	d = b + c	е	f	g = f - d
RSR Deck Overlay						
Capital Outlay Support	8.0	(3.5)	4.5	2.7	4.5	-
Capital Outlay Construction	16.9	3.6	20.5	12.4	20.5	-
Project Reserve	0.1	(0.1)	-	-	-	-
TOTAL	25.0	-	25.0	15.1	25.0	-

Note: Details may not sum to totals due to rounding effects.

**RSRB Deck Overlay Schedule Summary** 

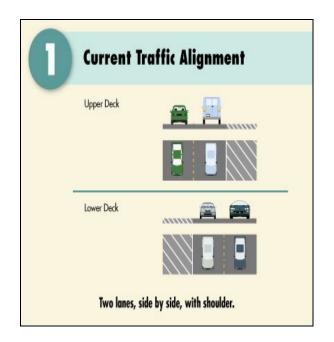
Project	BATA Project Completion Baseline (07/2005)	Approved Changes (Months)	Project Complete Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	January 2007	-	January 2007	January 2007	-

Project Status: Construction work started on August 2, 2006. All lanes on the bridge have been completed with polyester overlay. Striping and finger joint repair is also completed; as is all construction work, which finished by November 22, 2006. Removal of construction area signs will be done during the week of November 27, 2006.

#### **Project Issues:**

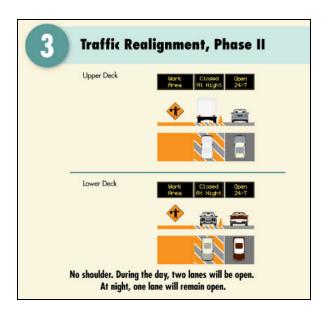
#### **Project Photographs**

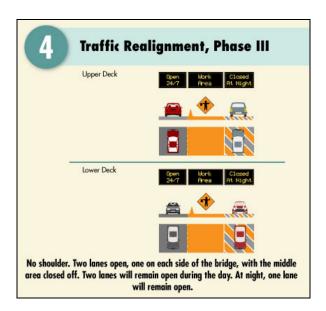




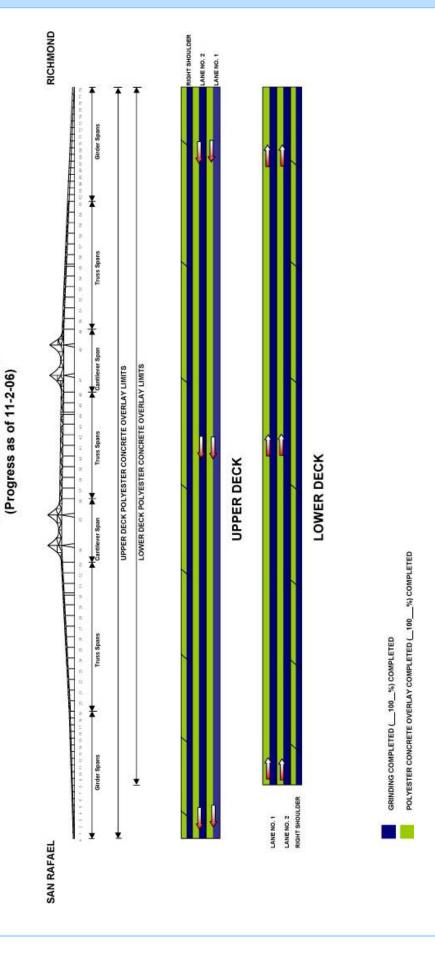


# Richmond San Rafael Deck Overlay Project Phasing of Work





RICHMOND-SAN RAFAEL BRIDGE CONTRACT No. 04-041524



#### Interstate 880/State Route 92 Interchange Reconstruction Project

**Project Description:** Modify the existing cloverleaf interchange to increase capacity and improve safety and traffic operations.

Interstate 880/State Route 92 Interchange Cost Summary (\$Millions)

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance
a	В	С	d = b + c	e	f	g = f - d
I-880/SR-92 Interchange Improvement						
Capital Outlay Support	28.8	-	28.8	30.1	51.7	22.9
Capital Outlay Construction	94.8	-	94.8	-	122.5	27.7
Capital Outlay Right-of-Way	9.9	-	9.9	8.0	12.4	2.5
Project Reserve	0.3	-	0.3	-	9.7	9.4
TOTAL	133.8	-	133.8	38.1	196.3	62.5

Note: Details may not sum to totals due to rounding effects. \$9.6 million in ACTA funds included under Capital Outlay Construction. \$3.7 million included in Capital Outlay Construction for separate landscape contract.

Interstate 880/State Route 92 Interchange Schedule Summary

	BATA Project		Project Complete		
Project	Completion Baseline (07/2005)	Approved Changes (Months)	Current Approved Schedule (10/2006)	Contract Complete Schedule Forecast (10/2006)	Schedule Variance (Months)
I-880/SR-92 Interchange Reconstruction	November 2010	-	November 2010	June 2011	7

**Project Status:** PS&E was approved by Caltrans at the end October 2006. Formal Risk Advertisement approval by Caltrans is expected to occur in November 2006, pending approval of the construction capital fund allocation plan. It is proposed to allocate the construction funds after the bids are opened. Risk Advertisement target date is early December 2006. Right-of-way acquisition is still in progress. Outstanding parcels include the Union Pacific Railroad parcel, a gas station parcel at Route 92 and Santa Clara St., and the parcels affected by the utility underground along Lindenwood Way. Right of way certification target date is early April 2007. Bids would open shortly afterwards, at which time BATA will take budget update actions as needed. Begin construction target date is June 2007. Construction duration is expected to be four (4) years.

#### **Project Issues:**

Issue	Mitigating Action
The forecast schedule included an aggressive schedule for right-of-way acquisition that provided for 18 months to clear numerous parcels in the project area. Additional time will be required to negotiate with parcel owners and the railroad complete property acquisition.	Delays in right-of-way acquisitions are impacting the advertisement and construction of the project. BATA and Caltrans are reviewing methods to accelerate the right-of-way procurement and begin the project. Also, the construction contract will be advertised with an A+B specification, which could reduce the construction duration and partially recover the project schedule.
Bids received on the I-238 Widening contract indicates that the construction estimate may be higher than currently forecasted, from \$196.3 million to \$216.8 million.	Caltrans and BATA will perform a further in-depth review of the estimated costs of major contract items.

#### Other Completed Regional Measure 1 (RM1) Projects

Summary Description: Other completed Regional Measure 1 projects are the following: (a) Widen the San Mateo-Hayward Bridge along its low-trestle section and its eastern approach, (b) Widen the Bayfront Expressway (SR 84) from the Dumbarton Bridge to the U.S. 101/Marsh Road interchange, (c) Construct an eastern approach (Richmond Parkway) between the Richmond-San Rafael Bridge and Interstate 80 near Pinole, and (d) Modify the U.S. 101/University Avenue interchange, (e) Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Project.

Other Completed RM1 Projects Cost Summary (\$Millions)

Contract	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	Variance
a	В	С	d = b + c	е	f	g = f - d
San Mateo-Hayward Bridge Widening Project	217.8	-	217.8	208.6	211.9	(5.9)
Bayfront Expressway Widening Project	36.1	-	36.1	33.1	36.1	-
Richmond Parkway Project	5.9	-	5.9	3.9	5.9	-
U.S. 101/University Interchange	3.8	-	3.8	3.7	3.8	-
RSR Trestle, Fender, and Joint Rehabilitation	102.1	-	102.1	80.0	97.1	(5.0)
TOTAL	365.7	-	365.7	329.3	354.8	(10.9)

**Schedule Summary** 

Project	Actual Project Completion Date
Richmond Parkway Project	May 2001
San Mateo-Hayward Bridge Widening Project	February 2003
Bayfront Expressway Widening Project	January 2004
U.S. 101/University Interchange	April 2004
Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation	August 2005

**Project Status:** Construction has been completed on the above listed contracts.

Project Issues: None.



#### **APPENDICES**

- A Toll Bridge Seismic Retrofit Program:
  San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost
  Detail
- B Toll Bridge Seismic Retrofit Program Cost Detail
- C Toll Bridge Seismic Retrofit Program Summary Schedule
- D Regional Measure 1 Program Cost Detail
- **E** Regional Measure 1 Program Summary Schedule

\* Cost forecasts shown herein are as of June 30, 2006. Forecasts for the Monthly Reports are generally updated on a quarterly basis in conjunction with Risk Analysis assessments for the TBSRP Projects and the TBSRP Quarterly Reports.

# Appendix A: Toll Bridge Seismic Retrofit Program (\$Millions)

#### San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost Detail Current

Contract	EA Number	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	At-Completion Variance
a	b	C	d	e = c + d	f	g	h =g - e
San Francisco-Oakland Bay Bridge East Span Replacement Project							
East Span - Skyway	01202X						
Capital Outlay Support Capital Outlay Construction		197.0 1,293.0	-	197.0 1,293.0	150.3 1,100.9	197.0 1,293.0	-
Total		1,490.0	-	1,490.0	1,100.9	1,490.0	-
East Span - SAS Superstructure	0120FX	,		•	•	,	
Capital Outlay Support	0.20.71	214.6	-	214.6	25.6	214.6	-
Capital Outlay Construction		1,753.7	-	1,753.7	143.9	1,767.4	13.7
Total		1,968.3	-	1,968.3	169.5	1,982.0	13.7
East Span - SAS E2/T1 Foundations	0120EX						-
Capital Outlay Support		52.5	-	52.5	15.7	52.5	-
Capital Outlay Construction		313.5	-	313.5	181.1	313.5	-
Total		366.0	-	366.0	196.8	366.0	-
SAS W2 Foundations	0120CX						
Capital Outlay Support		10.0	-	10.0	9.2	10.0	-
Capital Outlay Construction  Total		26.4	-	26.4	25.1	26.4	-
		36.4	-	36.4	34.3	36.4	-
YBI Transition Structures	0120PX						
Capital Outlay Support Capital Outlay Construction		78.7 299.3	-	78.7 299.3	11.1	78.7 318.5	19.2
,					-		
Total		378.0	-	378.0	11.1	397.2	19.2
Oakland Touchdown (see notes below)	01204X						
Capital Outlay Support		74.4	-	74.4	22.4	92.1	17.7
Capital Outlay Construction		283.8	-	283.8	-	302.5	18.7
Total		358.2	-	358.2	22.4	394.6	36.4
* OTD Submarine Cable	0120K4						
Capital Outlay Support					0.2	3.0	
Capital Outlay Construction					-	9.6	
Total					0.2	12.6	
* OTD No. 1 (Westbound)	0120L4						
Capital Outlay Support					2.2	49.9	
Capital Outlay Construction					-	226.5	
Total					2.2	276.4	
* OTD No. 2 (Eastbound)	0120M4						
Capital Outlay Support					0.2	15.8	
Capital Outlay Construction					-	62.0	
Total					0.2	77.8	
* OTD Electrical Systems	0120N4				0.2	11.0	
Capital Outlay Support	3120117				_	1.4	
Capital Outlay Construction					-	4.4	
Total					_	4.4 5.8	
iotai					-	5.0	

Notes: Oakland Touchdown Cost-to-Date and Cost Forecast includes prior-to-split Capital Outlay Support Costs.

# Appendix A: Toll Bridge Seismic Retrofit Program (\$Millions)

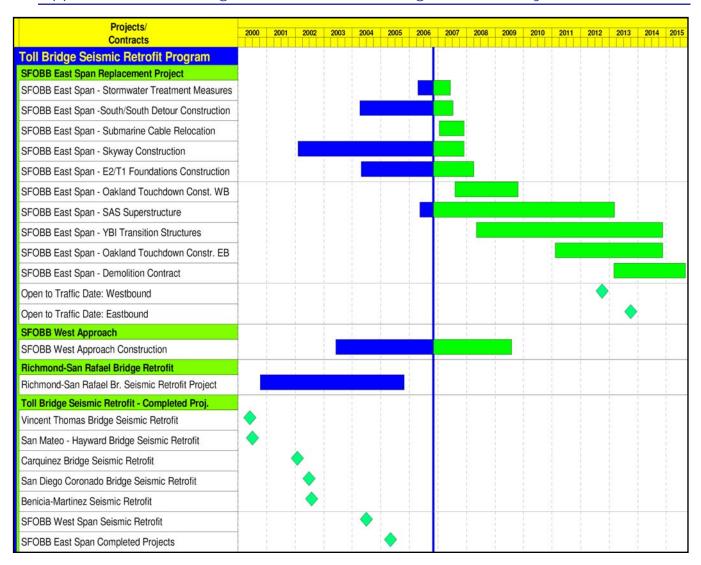
# San Francisco-Oakland Bay Bridge (SFOBB) East Span Replacement Project Cost Detail (Cont'd.)

		AB 144 / SB 66		Current Approved		Cost	
Contract	EA Number	Budget (07/2005)	Approved Changes	Budget (10/2006)	Cost To Date (10/2006)	Forecast (10/2006)	At-Completion Variance
a	b	С	d	e = c + d	f	g	h =g - e
YBI South/South Detour	0120RX						
Capital Outlay Support		29.5	-	29.5	17.1	29.5	-
Capital Outlay Construction		131.9	-	131.9	36.3	152.2	20.3
Total		161.4	-	161.4	53.4	181.7	20.3
Existing Bridge Demolition	01209X						
Capital Outlay Support	0.20021	79.7	-	79.7	0.2	79.7	_
Capital Outlay Construction		239.2	-	239.2	-	222.0	(17.2)
Total		318.9	-	318.9	0.2	301.7	(17.2)
YBI/SAS Archeology	01207X						
Capital Outlay Support		1.1	-	1.1	1.1	1.1	-
Capital Outlay Construction		1.1	-	1.1	1.1	1.1	-
Total		2.2	-	2.2	2.2	2.2	-
YBI - USCG Road Relocation	0120QX						
Capital Outlay Support		3.0	-	3.0	2.7	3.0	-
Capital Outlay Construction		3.0	-	3.0	2.8	3.0	-
Total		6.0	-	6.0	5.5	6.0	-
YBI - Substation and Viaduct	0120GX						
Capital Outlay Support		6.5	-	6.5	6.4	6.5	-
Capital Outlay Construction		11.6	-	11.6	11.3	11.6	-
Total		18.1	-	18.1	17.7	18.1	-
Oakland Geofill	01205X						-
Capital Outlay Support		2.5	-	2.5	2.5	2.5	-
Capital Outlay Construction		8.2	-	8.2	8.2	8.2	-
Total		10.7	-	10.7	10.7	10.7	-
Pile Installation Demonstration Project	01208X						
Capital Outlay Support	0.200%	1.8	_	1.8	1.8	1.8	_
Capital Outlay Construction		9.2	-	9.2	9.2	9.2	_
Total		11.0	-	11.0	11.0	11.0	-
Stormwater Treatment Measures	0120JX						
Capital Outlay Support	0120JX	6.0	_	6.0	5.5	6.0	_
Capital Outlay Construction		15.0	_	15.0	4.4	15.0	_
Total		21.0	_	21.0	9.9	21.0	_
		21.0		21.0	3.3	21.0	
Right-of-Way and Environmental	040070						
Mitigation Capital Outlay Support	0120X9						
Capital Outlay & Right-of-Way		- 72.4	-	- 72.4	38.8	- 72.4	-
Total		72.4		72.4	38.8	72.4	_
Total	04343X & (			72.4	30.0	12.4	
0 10 1 5 11 5 10 5 11	04040X & 1	04000X					
Sunk Cost - Existing East Span Retrofit Capital Outlay Support		20 F		20.5	20 F	20 F	
Capital Outlay Support  Capital Outlay Construction		39.5 30.8	-	39.5 30.8	39.5 30.8	39.5 30.8	-
Total		70.3	-	70.3	70.3	70.3	-
		70.0		70.0	70.0	70.0	
Other Capital Outlay Support Environmental Phase		07.7		07.7	07.7	07.7	
Pre-Split Project Expenditures		97.7 44.9	-	97.7 44.9	97.7 44.9	97.7 44.9	-
Non-project Specific Costs		20.0	-	20.0	3.2	20.0	-
Total		162.6	-	162.6	145.8	162.6	-
Subtotal Capital Outlay Support		959.4	_	959.4	456.9	977.1	17.7
Castotal Capital Catlay Capport		3J3. <del>4</del>	-	333.4	₹50.5	311.1	11.1
Subtotal Capital Outlay Construction		4,492.1	-	4,492.1	1,593.9	4,546.8	54.7
Other Budgeted Capital		35.1	-	35.1	0.6	11.0	(24.1)
Total SFOBB East Span Replacement							
Project		5,486.6	_	5,486.6	2,051.4	5,534.9	48.3
		2,10010		2,100.0	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2,00-1.0	-10.0

# Appendix B: Toll Bridge Seismic Retrofit Program Cost Detail (\$Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	At-Completion Variance
a	С	d	e = c + d	f	g	h = g - e
SFOBB East Span Replacement Project	050.4		050.4	450.0	077.4	47.7
Capital Outlay Support	959.4	-	959.4	456.9	977.1	17.7
Capital Outlay Construction	4,492.1	-	4,492.1	1,593.9	4,546.8	54.7
Other Budgeted Capital	35.1	-	35.1	0.6	11.0	(24.1)
Total	5,486.6	-	5,486.6	2,051.4	5,534.9	48.3
SFOBB West Approach Replacement						
Capital Outlay Support	120.0	-	120.0	84.9	120.0	-
Capital Outlay Construction	309.0	-	309.0	215.5	309.0	-
Total	429.0	-	429.0	300.4	429.0	-
SFOBB West Span Retrofit						-
Capital Outlay Support	75.0	-	75.0	74.8	75.0	-
Capital Outlay Construction	232.9	-	232.9	226.2	232.9	-
Total	307.9	-	307.9	301.0	307.9	-
Richmond-San Rafael Bridge Retrofit						
Capital Outlay Support	134.0	(7.0)	127.0	125.6	127.0	-
Capital Outlay Construction	780.0	(82.0)	698.0	665.6	698.0	-
Total	914.0	(89.0)	825.0	791.2	825.0	-
Benicia-Martinez Bridge Retrofit						-
Capital Outlay Support	38.1	-	38.1	38.1	38.1	-
Capital Outlay Construction	139.7	-	139.7	139.7	139.7	-
Total	177.8	-	177.8	177.8	177.8	-
Carquinez Bridge Retrofit						
Capital Outlay Support	28.7	-	28.7	28.8	28.7	-
Capital Outlay Construction	85.5	-	85.5	85.4	85.5	-
Total	114.2	-	114.2	114.2	114.2	-
San Mateo-Hayward Bridge Retrofit						-
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	-	135.4	135.3	135.4	-
Total	163.5	-	163.5	163.4	163.5	-
Vincent Thomas Bridge Retrofit (Los Angeles)						
Capital Outlay Support	16.4		16.4	16.4	16.4	
Capital Outlay Support Capital Outlay Construction	42.1	-	42.1	42.0	42.1	-
		-				-
Total	58.5	-	58.5	58.4	58.5	-
San Diego-Coronado Bridge Retrofit	20.5		20.5	00.0	22.5	
Capital Outlay Support	33.5	-	33.5	33.2	33.5	-
Capital Outlay Construction	70.0	-	70.0	69.4	70.0	-
Total	103.5		103.5	102.6	103.5	-
Subtotal Capital Outlay Support	1,433.2	(7.0)	1,426.2	886.8	1,443.9	17.7
Subtotal Capital Outlay	6,286.7	(82.0)	6,204.7	3,173.0	6,259.4	54.7
Subtotal Other Budgeted Capital	35.1	-	35.1	0.6	11.0	(24.1)
Miscellaneous Program Costs	30.0	-	30.0	24.9	30.0	-
Subtotal Toll Bridge Seismic Retrofit Program	7,785.0	(89.0)	7,696.0	4,085.3	7,744.3	48.3
Program Contingency	900.0	89.0	989.0	-	940.7	(48.3)
Total Toll Bridge Seismic Retrofit Program	8,685.0	-	8,685.0	4,085.3	8,685.0	_

#### Appendix C: Toll Bridge Seismic Retrofit Program Summary Schedule



# Appendix D: Regional Measure 1 Program Cost Detail (\$Millions)

Project	EA Number	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	At-Completion Variance
a	b	С	d	e = c + d	f	g	h =g - e
New Parisis Martines Bridge Busines							
New Benicia-Martinez Bridge Project	00000						
New Bridge	00603_	04.0	7.7	00.0	00.0	00.0	
Capital Outlay Support		84.9	7.7	92.6	80.3	92.6	-
Capital Outlay Construction							-
BATA Funding		661.9	107.3	769.2	693.6	769.2	-
Non-BATA Funding		10.1	-	10.1	13.9	10.1	-
Subtotal		672.0	107.3	779.3	707.5	779.3	-
Total		756.9	115.0	871.9	787.8	871.9	-
I-680/I-780 Interchange Reconstruction	00606_						
Capital Outlay Support	00000_						
BATA Funding		24.9	4.0	28.9	27.7	28.9	_
•		1.4	5.1	6.5	5.5	6.5	-
Non-BATA Funding							-
Subtotal		26.3	9.1	35.4	33.2	35.4	-
Capital Outlay Construction							
BATA Funding		54.7	16.1	70.8	65.0	70.8	-
Non-BATA Funding		21.6	-	21.6	15.4	21.6	-
Subtotal		76.3	16.1	92.4	80.4	92.4	-
Total		102.6	25.2	127.8	113.6	127.8	-
I-680/Marina Vista Interchange Reconstruction	00605_						
Capital Outlay Support	- · · · · · -	18.3	1.2	19.5	19.6	19.5	_
Capital Outlay Construction		51.5	8.1	59.6	54.7	59.6	_
Total		69.8	9.3	79.1	74.3	79.1	-
Now Tall Diago and Administration Duildian	00004						
New Toll Plaza and Administration Building	00604_						
Capital Outlay Support		11.9	3.3	15.2	14.7	15.2	-
Capital Outlay Construction		24.3	2.0	26.3	22.0	26.3	-
Total		36.2	5.3	41.5	36.7	41.5	-
Existing Bridge & Interchange Modifications	0060A_						
Capital Outlay Support		4.3	5.7	10.0	5.1	10.0	-
Capital Outlay Construction		17.2	10.9	28.1	-	28.1	-
Total		21.5	16.6	38.1	5.1	38.1	-
Other Contracts	See note below						
	See Hote below	11 4	(2.2)	0.4	6.0	0.4	
Capital Outlay Support		11.4	(2.3)	9.1	6.3	9.1	-
Capital Outlay Construction		20.3	(1.3)	19.0	15.2	19.0	-
Capital Outlay Right-of-Way		20.4	(0.1)	20.3	12.3	20.3	-
Total		52.1	(3.7)	48.4	33.8	48.4	-
Subtotal BATA Capital Outlay Support		155.7	19.7	175.3	153.7	175.3	-
Subtotal BATA Capital Outlay Construction		829.9	143.1	973.0	850.5	973.0	-
Subtotal Capital Outlay Right-of-Way		20.4	(0.1)	20.3	12.3	20.3	_
Subtotal Non-BATA Capital Outlay Support		1.4	5.1	6.5	5.5	6.5	_
Subtotal Non-BATA Capital Outlay Construction		31.7	-	31.7	29.3	31.7	_
Project Reserves		20.8	35.3	56.2	-	56.2	-
Total New Benicia-Martinez Bridge Project		1,059.9	203.1	1,263.0	1,051.3	1,263.0	_

Notes:

Includes EA's 00601\_, 00608\_, 00609\_, 0060A\_, 0060C\_, 0060E\_, 0060F\_, 0060G\_, and 0060H\_ and all Project Right-of-Way

# Appendix D: Regional Measure 1 Program Cost Detail (\$Millions) (Cont'd.)

Project	EA Number	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	At-Completion Variance
a	b	С	d	e = c + d	f	g	h =g - e
Carquinez Bridge Replacement Project							
New Bridge	01301_						
Capital Outlay Support		60.5	(0.3)	60.2	60.1	60.2	-
Capital Outlay Construction		253.3	4.0	257.3	256.9	257.3	-
Total		313.8	3.7	317.5	317.0	317.5	-
Crockett Interchange Reconstruction	01305_						
Capital Outlay Support		32.0	(0.1)	31.9	31.9	31.9	-
Capital Outlay Construction		73.9	-	73.9	71.9	73.9	-
Total		105.9	(0.1)	105.8	103.8	105.8	-
Existing 1927 Bridge Demolition	01309						
Capital Outlay Support		16.1	-	16.1	10.7	16.0	(0.1)
Capital Outlay Construction		35.2	-	35.2	21.0	35.2	`-
Total		51.3	-	51.3	31.7	51.2	(0.1)
Other Contracts	See note below						
Capital Outlay Support	Coo note below	15.8	(0.7)	15.1	14.8	15.1	_
Capital Outlay Construction		18.8	(0.7)	18.1	15.3	17.9	(0.2)
Capital Outlay Right-of-Way		10.5	-	10.5	9.9	10.5	(0.2)
Total		45.1	(1.4)	43.7	40.0	43.5	(0.2)
Subtotal BATA Capital Outlay Support		124.4	(1.1)	123.3	117.5	123.2	(0.1)
		381.2	, ,				, ,
Subtotal BATA Capital Outlay Construction			3.3	384.5	365.1	384.3 10.5	(0.2)
Subtotal Capital Outlay Right-of-Way		10.5 12.1		10.5 9.9	9.9	10.5	0.3
Project Reserves		12.1	(2.2)	9.9	-	10.2	0.3
Total Carquinez Bridge Replacement	Project	528.2	-	528.2	492.5	528.2	-

Notes:

Other Contracts includes EA's 01302\_, 01303\_, 01304\_, 01306\_, 01307\_, 01308\_, 0130A\_, 0130C\_, 0130D\_, 0130F\_, 0130G\_, 0130H\_, 0130J\_, 00453\_, 00493\_, 04700\_, 00607\_, 2A270\_, and 29920\_ and all Project Right-of-Way

# Appendix D: Regional Measure 1 Program Cost Detail (\$Millions) (Cont'd.)

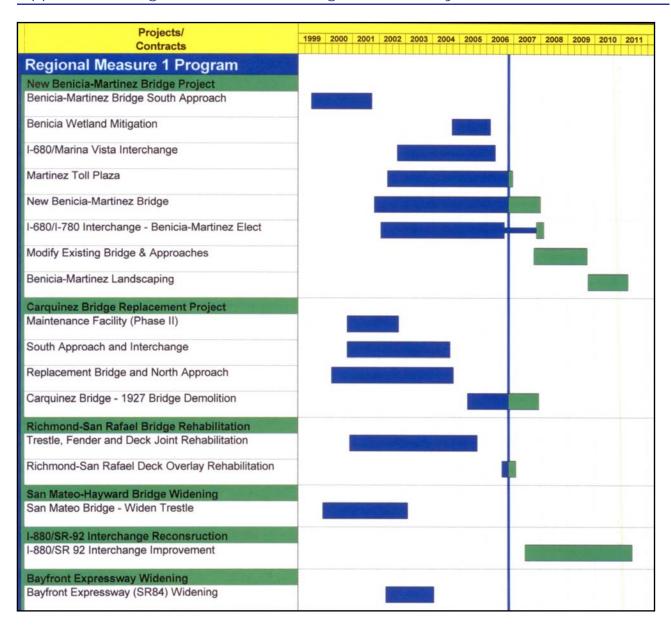
Project	EA Number	BATA Budget (07/2005)	Approved Changes	Current Approved Budget (10/2006)	Cost To Date (10/2006)	Cost Forecast (10/2006)	At-Completion Variance
a	b	С	d	e = c + d	f	g	h =g - e
Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation	See note <sup>1</sup> bel	ow					
Capital Outlay Support BATA Funding		2.2	_	2.2	1.4	2.2	_
Non-BATA Funding		8.6	-	8.6	10.4	10.4	1.8
Subtotal		10.8	_	10.8	11.8	12.6	1.8
Capital Outlay Construction							
BATA Funding		40.2	-	40.2	33.5	33.4	(6.8)
Non-BATA Funding		51.1	-	51.1	34.7	51.1	-
Subtotal		91.3	-	91.3	68.2	84.5	(6.8)
Project Reserves		-	-	-	-	-	- (5.0)
Total		102.1	-	102.1	80.0	97.1	(5.0)
Richmond-San Rafael Bridge Deck Overlay							
Rehabilitation	0415U_						
Capital Outlay Support		4.0	0.5	4.5	0.7	4.5	
BATA Funding Non-BATA Funding		4.0 4.0	0.5 (4.0)	4.5	2.7	4.5	-
Subtotal		4.0 8.0	(3.5)	4.5	2.7	4.5	-
Capital Outlay Construction		16.9	3.6	20.5	12.4	20.5	_
Project Reserves		0.1	(0.1)	-	-	-	-
Total		25.0	-	25.0	15.1	25.0	-
Richmond Parkway Project (RM 1 Share Only) Capital Outlay Support	Non-Caltrans	-	-	-	-	-	_
Capital Outlay Construction		5.9	-	5.9	3.9	5.9	-
Total		5.9	-	5.9	3.9	5.9	-
San Mateo-Hayward Bridge Widening	See note <sup>2</sup> bel	ow					
Capital Outlay Support		34.6	(0.2)	34.4	34.1	34.4	-
Capital Outlay Construction		180.2	(1.1)	179.1	174.0	176.2	(2.9)
Capital Outlay Right-of-Way		1.5	-	1.5	0.5	0.6	(0.9)
Project Reserves		1.5	1.3	2.8	-	0.7	(2.1)
Total		217.8	-	217.8	208.6	211.9	(5.9)
I-880/SR-92 Interchange Reconstruction	FA's 23317 (	01601_, and 01	602				
Capital Outlay Support Capital Outlay Construction		28.8	-	28.8	30.1	51.7	22.9
BATA Funding		85.2	-	85.2	-	112.9	27.7
Non-BATA Funding		9.6	-	9.6	-	9.6	-
Subtotal		94.8	-	94.8	-	122.5	27.7
Capital Outlay Right-of-Way Project Reserves		9.9 0.3	-	9.9 0.3	8.0	12.4 9.7	2.5 9.4
Total		133.8	-	133.8	38.1	196.3	62.5
	E41: 0040E 4			100.0	00.1	100.0	02.0
Bayfront Expressway Widening	EA'S 00487_, (	01511_, and 01	_	0.0	0.4	0.2	
Capital Outlay Support Capital Outlay Construction		8.6 26.5	(0.3)	8.3 26.5	8.1 24.8	8.3 26.5	-
Capital Outlay Construction  Capital Outlay Right-of-Way		0.2	-	0.2	0.2	0.2	-
Project Reserves		0.8	0.3	1.1	-	1.1	_
Total		36.1	-	36.1	33.1	36.1	-
US 101/University Avenue Interchange Modification Capital Outlay Support	Non-Caltrans	_	_	_	_	_	_
Capital Outlay Construction		3.8	-	3.8	3.7	3.8	-
Total		3.8	-	3.8	3.7	3.8	-
Subtotal BATA Capital Outlay Support		358.3	18.6	376.8	347.6	399.6	22.8
Subtotal BATA Capital Outlay Construction		1,569.8	148.9	1,718.7	1,467.9	1,736.5	17.8
Subtotal Capital Outlay Right-of-Way Subtotal Non-BATA Capital Outlay Support		42.5 14.0	(0.1)	42.4 15.1	30.9	44.0 16.0	1.6
Subtotal Non-BATA Capital Outlay Support Subtotal Non-BATA Capital Outlay Construction		92.4	1.1	15.1 92.4	15.9 64.0	16.9 92.4	1.8
Project Reserves		35.6	34.6	70.3	-	77.9	7.6
Total RM1 Program		2,112.6	203.1	2,315.7	1,926.3	2,367.3	51.6
		, -		,	,	,	

Notes:

<sup>&</sup>lt;sup>1</sup> Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Includes Non-TBSRA Expenses for EA 0438U\_ and 04157\_

<sup>&</sup>lt;sup>2</sup> San Mateo-Hayward Bridge Widening Includes EA's 00305\_, 04501\_, 04502\_, 04503\_, 04504\_, 04505\_, 04506\_, 04507\_, 04508\_, 04509\_, 27740\_, 27790\_, 04860\_

#### Appendix E: Regional Measure 1 Program Summary Schedule



# Appendix F: Glossary of Terms

**AB144/SB 66 BUDGET:** the planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005 and September 29, 2005, respectively.

**BATA BUDGET:** the planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

**APPROVED CHANGES:** for cost, changes to the AB144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

**CURRENT APPROVED BUDGET:** the sum of the AB144/SB66 Budget or BATA Budget and Approved Changes.

**COST TO DATE**: the actual expenditures incurred by the program, project, or contract as of the month and year shown.

**COST FORECAST:** the current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

**AT COMPLETION VARIANCE or VARIANCE (cost):** the mathematical difference between the Cost Forecast and the Current Approved Budget.

**AB 144/SB 66 PROJECT COMPLETE BASELINE:** the planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

**BATA PROJECT COMPLETE BASELINE:** the planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

**PROJECT COMPLETE CURRENT APPROVED SCHEDULE**: the sum of the AB144/SB66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

**PROJECT COMPLETE SCHEDULE FORECAST**: the current projected date for the completion of the program, project, or contract.

**SCHEDULE VARIANCE or VARIANCE (schedule):** the mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

The following information is provided in accordance with California Government code Section 7550:

This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) for the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs. The contract value for the monitoring efforts, technical analysis, and field site works that contribute to these reports, as well as the report preparation and production, is \$1,574,873.

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